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7 May 1985

Worldwide Report

**TELECOMMUNICATIONS POLICY,
RESEARCH AND DEVELOPMENT**



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7 May 1985

WORLDWIDE REPORT

TELECOMMUNICATIONS POLICY, RESEARCH AND DEVELOPMENT

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AUSTRALIA

BRIEFS

AUSSAT COMMUNICATIONS SERVICES PLAN—Australia's satellite system, Aussat, may provide communications services to the Southwest Pacific. The Federal Government has approved a proposal by the Aussat Authority to modify its third satellite to give it the potential to provide communications facilities for neighboring regional countries, including New Zealand. The minister for communications, Mr Duffy, said the question of services was a matter for the countries themselves in consultation with the Aussat Authority. The design modifications will allow three transponders to be switched to cover the Southwest Pacific. Mr Duffy said that depending on overall customer demand, the third Aussat satellite will be launched next year. Radio Australia's Canberra office says it was originally expected that Aussat capacity to serve the Southwest Pacific would have been part of the second generation of Aussat satellites, due to go into service in the early 1990's. The first two Aussat satellites, scheduled to be launched later this year, will provide radio, television, telephone, and data services across Australia. [Text] [Melbourne Overseas Service in English 0830 GMT 3 Apr 85 BK]

SATELLITE GROUND STATIONS—Construction of the first of a series of satellite ground stations for aviation communications began at Canberra airport today. The minister for aviation, Mr Peter Morris, said that 100 stations would be built throughout Australia at a cost of \$31 million [Australian dollars] as part of the country's aviation satellite system. They would be used in conjunction with the Aussat satellite system. Mr Morris said a typical satellite station would have a shelter, two antennae dishes beaming towards Aussat system, and—depending on location—a tower up to 40 meters high. [Text] [Melbourne Overseas Service in English 0830 GMT 10 Apr 85 BK]

PRC TELECOMMUNICATIONS ACCORD—The Australian Telecommunications Authority, Telecom, has signed a technical cooperation agreement with its Chinese counterpart. The two authorities have already sent technical delegations to visit each other's facilities and discuss ways of dealing with common problems. Items of common interest have been Australia's use of solar power for microwave radio routes and ways of providing telephone services in rural and remote areas. [Text] [Melbourne Overseas Service in English 0830 GMT 13 Apr 85 BK]

HONG KONG

INTELPOST TO LINK HONG KONG WITH PRC

Hong Kong HONGKONG STANDARD in English 19 Mar 85 p 4

[Text]

HONGKONG and China are to come much closer with the introduction of the Intel-post network to the fast growing southern city of Guangzhou later this year.

The Postmaster-General, Mr Hugh Ardley, said yesterday that senior local and Guangzhou post office officials have just completed negotiating the operation of the service between the two cities.

He said the connection with China is particularly important as it will provide facilities for a faster form of communication in the Chinese language, which needs the aid of coding arrangements in other forms of transmission.

At present, Hongkong is linked to 29 countries and negotiations with post office officials from Canada, Egypt and Spain are also under way.

Intelpost (International Electronic Postal Service) is the high-speed facsimile transmission of documents,

drawings and personal messages which arrive at their destinations within hours.

Ardley said the public has well received the service as usage has more than doubled since it was first introduced in December 1982.

"We are deeply committed to the success of Intelpost as a further means to counter the proliferation of courier activities and the erosion of the traditional mail service," Ardley added.

To promote the post office's premium services, Ardley said the government started providing the post office with a budget since 1984.

And in the coming financial year, the post office will have \$600,000 to promote its Intelpost, Speedpost, air parcel and philatelic services as well.

The Postmaster General was speaking to the press at the opening ceremony of the Paris Group, an association of postal administrators formed in 1978.

CS0: 5550/0053

HONG KONG

HONG KONG EXPERTISE FOR BEIJING ELECTRONICS GROWTH

Hong Kong SOUTH CHINA MORNING POST in English 15 Mar 85 [no page given]

[Article by Suzanne Sim]

[Text]

China intends to absorb some of Hong-kong's expertise in electronics in order to help boost exports and raise the standards of its electronic products.

Mr Zhang Qiming, vice-president of the China Electronics Import Export Corps (CEIEC), in Hong-kong for the Electronics and Electronics Products Exhibition '85, told a press conference the aim of China's participation is to learn, exchange ideas and to sell its products.

Mr Zhang said there is still a wide gap between the standard of China's electronics products — consumer and commercial — and that of the developed countries.

He said China is anxious to absorb expertise and technological knowhow from Hongkong and other countries in the hope of improving the standard and quality of its products.

He said the development of China's electronics industry is one of its vital policies.

In September, China's State Council established a special unit charged with the role of upgrading the technology in the country's electronics industry and its main function is to "import, digest,

develop and innovate."

Currently, only five per cent of China's electronics products are exported.

He noted that China needs to import more integrated circuits (ICs) and large-scale integrated circuits (LSICs) — the vital component chips for microcomputers, mainframe computers and other hi-tech electronic products.

However, he pointed out that since the establishment five years ago of CEIEC — the major marketing and promotion arm of the country's electronics goods, comprising about 2,000 production enterprises under its umbrella — China's electronics trade has recorded a three-fold growth.

Last year, two-way trade in electronic products totalled US\$800 million, while exports amounted to a mere \$100 million.

The number of products exported grew from the initial 20 to over 90.

The production of electronics goods grew by 42.6 per cent, he said without being specific.

This growth, Mr Zhang said, has served to accelerate the development of China's electronics sector, restructuring the technology, and upgrading the quality and standard of the products.

Products exported include calculators and satellite radars, component parts and

composite electronic units as well as technology transfer on a small scale.

The products, mainly components, were not only exported to developing countries but also to the US, Japan and Western Europe, Hong-kong and other highly industrialised nations, he said.

China exported about \$7 million worth of component parts to Hongkong during the Canton trade fair, Mr Zhang added.

However, he said China hopes to further expand its exports to the world and has identified South Africa, Latin America and the Middle East as the greatest potential markets.

Efforts will be channelled into penetrating these areas, he added.

The level of technology transfer and product development in China through joint ventures with foreign companies has also been growing at a rapid rate, reaching \$700 million last year.

Turning to the shortage of component parts such as ICs in China, Mr Zhang said relaxation in US exports of high technology to China is likely to help in the country's development.

The three-day exhibition, which starts tomorrow, is organised by Ava International Ltd.

HONG KONG

BRIEFS

ELECTRONICS INDUSTRY GROWTH--The electronics industry accounts for more than 35 per cent of foreign investment in Hongkong, according to Mr Robert Benoit, chief executive manager of Banque National de Paris in Hongkong. Mr Benoit, speaking at a marketing conference on the growth of electronics and semiconductor industries in Asia, said that investment amounts to about \$4.06 billion. Commenting on Hongkong's overall trade, Mr Benoit said the trade deficit narrowed considerably between 1983 and last year from \$14.74 billion to \$1.93 billion due to strong export growth. Reviving import demand from the US and other major markets was the main catalyst for the growth, he added. He also noted Hongkong's exports to China rose 81 per cent to \$11.3 billion, which has enabled China to overtake the UK and West Germany as Hongkong's second largest export market. But re-exports are growing faster than domestic exports, he said. Last year, re-exports accounted for 38 percent of the territory's total exports against 35 per cent in 1983. By the end of this year, it is expected that the re-export trade will constitute a 41 per cent share of Hongkong's total exports. [Text] [Hong Kong SOUTH CHINA MORNING POST in English 15 Mar 85 Supplement p 3]

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PEOPLE'S REPUBLIC OF CHINA

PRC, FRANCE SIGN SPACE TECHNOLOGY PROTOCOL

OW120837 Beijing XINHUA in English 0731 GMT 12 Feb 85

[Text] Paris, February 11 (XINHUA)—China and France agreed in a protocol today to cooperate in developing space technology. The protocol was signed here between French Minister of Research and Technology Hubert Curien and Chinese Vice-Minister of Astronautics Industry Li Xue.

Under the five-year protocol, the two countries will cooperate in basic and application research in areas of civil use of space such as launching systems, earth observation satellites, communication satellites, weather satellites and scientific and technological satellites, and in the development, trial, manufacturing and utilization of specialized equipment.

According to the protocol, which becomes effective today the program will involve exchange of personnel for joint participation of each other's research and development projects, exchange of experience, scientific information and data, joint academic seminar and training of technical personnel. A joint committee will be also set up to help facilitate the cooperation.

After the signatory ceremony, Li told reporters that as China and France have their own characteristics in developing space technology, their cooperation in this field has a vast prosperity and will benefit both sides.

CSO: 5500/4191

PEOPLE'S REPUBLIC OF CHINA

FUTURE TRENDS OF FIBER-OPTICS COMMUNICATIONS

Nanjing DIANLI XITONG ZIDONGHUA [AUTOMATION OF ELECTRIC POWER SYSTEMS] in Chinese Vol 9, No 1 Jan 85 pp 36-37, 44

[Article by Chen Qingmei [7115 3237 5019] of Nanjing Institute of Automation, Ministry of Hydropower: "Future Trends of Fiber-optics Communication and Its Applications in Electric Power Systems"]

[Excerpt] Fiber-optics communication is a rapidly growing technology. It is expanding at a very fast rate similar to microelectronics and computers.

II Development within China

Fiber-optics communication technology began in the mid- 1970's. Significant progress has been made in the research of optical devices as well as fibers and cables. We are in the process of bringing multi-mode, short wavelength fiber-optics communication systems to practical use. Presently, there are approximately 60 fiber-optics communication systems in China built for telephone relay, broadcasting, video monitoring, data trunk line and electric grid switching. Optical devices, cables, terminal equipment and instruments are mainly made in China. The primary bases of fiber-optics communication in China are Shanghai, Beijing, Nanjing and Wuhan. There are entities comprised of higher learning institutions, research institutes, design units and manufacturing plants in these four cities. They are fully supported by the leadership on the provincial and city level, and are guided and coordinated by the scientific commission for balanced development. From fiber pulling, cable making, optical device manufacturing to terminal development, from the study of optical fiber transmission theory to the design of transmission systems, they have research and pilot production capabilities to form a self-contained structure. In addition, research organizations in Guilin and Yongchuan are also actively engaged in the development of optical devices and fiber transmission systems.

Since 1979, secondary urban telephone relay fiber-optics communication systems, 8.448 MB/S(120 lines), were built in Shanghai (1.8 km), Beijing (3.3 km), Nanjing (4.4 km) and Wuhan (13.5 km). In October 1983, a 6.8 km, 34 MB/S(480 lines) fiber-optics communication system was built in Tianjin. The Ministry of Posts and Telecommunications has decided to use fiber-optics communications on main lines connecting Beijing to Tianjin (130 km) and Beijing to Harbin (1500 km). Shanghai has also decided to use fiber-optics technology to reform its urban telephone network.

Fiber-optics communication was used in the electric power industry early on. Nanjing Institute of Automation built an experimental line for Nanjing Electric Bureau in 1979. Later, three 2.048 MB/S (30 lines) fiber-optics communication systems were built in Fuzhou, Taiyuan and Yantong to transmit telephone calls and signals. These three practical systems made a significant impact on the feasibility of using fiber-optics technology in electric power systems.

The Nanjing Institute of Automation also developed a digital optical terminal and is developing devices for fiber protection, high voltage measurement by optical fiber and computer data transmission via fiber. It has the capability to develop fiber-optic transmission equipment as well as the technical strength to design, install and test fiber-optics technology for the electric power industry.

III. Applications in Electric Power Systems

It is encouraging to see rapid development of fiber-optics communication technology in China within a few short years. However, the lifetime of the equipment and the research on long wavelength, single-mode optical fiber are yet to be improved. The model, specification and quantity of optical cable, device and terminal cannot meet the actual demand. Therefore, many areas and departments imported foreign fiber-optic communication systems and are competing to bring in advanced fiber production lines.

As the electric power industry becomes automated, more and more reliable, high quality channels are required. From a survey conducted early this year, major problems in electric power communications are:

1. Difficulty in distributing carrier frequency spectrum in power systems causes insufficient channel capacity. Fiber-optics communications should be rapidly developed to provide sufficient channels.
2. Rising ground voltage is widely attributed as the cause for burnt cable and equipment. There is no effective way to overcome this problem. As the voltage increases, this problem will become more severe. Therefore, fiber-optics communication is desirable.
3. Cable installation is limited by city buildings and railroad crossings. It is rational and economical to install power lines and optical cables on the same pole.
4. Fiber-optics transmission of data acquired in a power plant is required to avoid electromagnetic interference.

From the contents and mode of transmission, communication may be categorized into the following types:

1. Communications transmitted by elevated grounded optical cables for long-range, medium volume channels.

2. Communications between substations and local and regional switching stations for elevated ground voltage and heavy loads.
3. Communications between substations and microwave stations for elevated ground and lightning production.
4. Communications within power plant for automatic control, video monitoring and measurement to prevent interference by the operating frequency.
5. Fiber-optics protection between substations (power plants) as short range protection channels.
6. Fiber-optics sensor for temperature variation of transformer fluid.
7. High voltage measurement.
8. Lightning observation by modern fiber-optics technique.

The electric power industry demands a variety of fiber-optics communication systems in quantity (including optical fiber, optical cable, and terminal equipment). In particular, elevated optical cable communication is desired. This mode of communication has been determined to be promising for the power industry in the world.

Elevated grounded fiber-optics communication is a new method utilizing the elevated ground line. It not only takes advantage of fiber-optics communication but also incorporates the characteristics of the electric power system. It can be used in lightning prevention as well as in communication. Not only optical cables can be protected, but also a great deal of installation costs can be saved. The communication system is built as the high voltage transmission line is completed. This new technology has a bright future in China in view of its wide territory and scattered ultrahigh voltage transmission lines.

The electric power industry is ready to adopt fiber-optics communication techniques in large quantities. It will require large quantities of fibers, cables, terminals and instruments. The relay range will be increased from a few kilometers to 30-50 km. The transmission capacity will be upgraded from 30 to 480 channels. The urgent matter is to develop elevated grounded optical cable communication technology. Based on the fiber-optics communication techniques used in foreign electric power systems together with our preliminary survey, it is estimated that we will be able to install 3,000-5,000 km of optical fiber per year in 1985-1990, 5,000-10,000 km in 1990-1995. By the year 2000, the electric power system will have a brand new look.

References

- [1] British BICC metal Limited ((Fibral Conductors)).
- [2] Tokyo Power Limited
- [3] Information Office of Wuhan Institute of Posts and Telecommunications, Fiber-optics Communication Technology.

PEOPLE'S REPUBLIC OF CHINA

SHANGHAI BUILDS SATELLITE TV RELAY STATION

OW141240 Shanghai JIEFANG RIBAO in Chinese 10 Apr 85 p 1

[Article by Lin Yishun]

[Excerpts] The satellite relay station developed by the Shanghai Radio and Television Technology Research Institute and seven other units has transmitted Japanese satellite TV programs in clear sound and pictures and vivid colors. Leaders and experts from the State Economic Commission, the Municipal Economic Commission, the Municipal Scientific and Technological Commission, and other departments concerned inspected the equipment in the station recently and said that it is another important contribution made by the engineering and technical personnel of the radio and TV technology department in developing China's satellite broadcasting work. [passage omitted]

In order to increase the area capable of receiving TV programs and improve the quality of transmission, China's departments concerned have decided to launch a TV satellite into a synchronous earth orbit within 2 or 3 years, which would cost every TV owner a considerable amount to equip the set with a satellite TV receiver. Therefore, the Shanghai Radio and Television Industry Co organized the technical forces of the whole company in developing the satellite TV relay station that can be used collectively and has the transmission power for a county. Hence, the owner of a TV set does not have to acquire additional equipment in order to receive satellite TV programs. To test the quality of the equipment, the Shanghai Radio and TV Technology Research Institute trial-received Japanese satellite TV programs for several days. It has been proved that the equipment has met technical specifications required by the state. [passage omitted]

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PEOPLE'S REPUBLIC OF CHINA

BURST ERROR CORRECTING DERIVED, COMPARED

Beijing TONGXIN XUEBAO [JOURNAL OF CHINA INSTITUTE OF COMMUNICATIONS] in Chinese No 4, Oct 84 pp 27-32

[Article by Guyang Jingsheng [2962 7122 2529 2973], South China Institute of Technology: "Burst Error Correcting Abilities for Maximum Length Code and Generalized First Order Reed-Muller Code"]

- [Summary] Using the fact that the Maximum Length Code is a set of m sequences and the dual code of a Hamming code, the burst error correcting ability of the Maximum Length Code is derived.

Because the first order generalized Reed-Muller Code is combined of a simple repetition code and the Maximum Length Code, the burst error correcting ability of the Reed-Muller Code is given. It is pointed out that these two codes have the same random error correcting abilities and almost the same burst error correcting abilities. However, the rate of the Reed-Muller Code is higher than that of the Maximum Length Code, so the Reed-Muller Code is better than the Maximum Length Code.

PEOPLE'S REPUBLIC OF CHINA

SYSTEM ANALYSIS OF LINEAR PREDICTIVE CODING ERRORS GIVEN

Beijing TONGXIN XUEBAO [JOURNAL OF CHINA INSTITUTE OF COMMUNICATIONS] in Chinese No 4, Oct 84 pp 47-53, 71

[Article by Zheng Shude [6774 2885 1795], Fan Shuchun [5400 2885 2504] and Bi Houjie [3968 0624 2638], all of Nanjing Institute of Posts and Telecommunications: "Analysis of Error Response of Linear DPCM"]

[Summary] A system analysis of the problem of errors of linear predictive coding is given. Beginning with error response, it discusses stable decay of errors. The paper also describes the relationship between error energy and predictive coefficients and between the energy and the position of samples, etc. Finally it discusses the problem of minimum energy, thus a basis for selecting a predictive design is given.

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PEOPLE'S REPUBLIC OF CHINA

TWO-DIMENSION INTRAFRAME IMAGE ENCODING EXPERIMENT REPORTED

Beijing TONGXIN XUEBAO [JOURNAL OF CHINA INSTITUTE OF COMMUNICATIONS] in Chinese No 4, Oct 84 pp 58-61

[Article by Xu Mengxia [1776 1321 0204], Beijing University: "An Experiment with 2-Dimensional Intraframe DPCM Image Encoding"]

[Summary] A known scheme of 2-dimensional intraframe DPCM coding of television signals is discussed again which has predicted value $\hat{x}_0 = \frac{1}{2}x_1' + \frac{1}{2}(x_1' + x_2')$.

Results of subjective tests with sequence test pictures (sampling frequency 10 MHz) by computer simulation show that the subjective quality of this scheme is excellent.

PEOPLE'S REPUBLIC OF CHINA

MOBILE TELEPHONE SIGNALLING CHANNEL TRAFFIC ANALYSIS DISCUSSED

Beijing TONGXIN XUEBAO [JOURNAL OF CHINA INSTITUTE OF COMMUNICATIONS] in Chinese No 4, Oct 84 pp 95-99

[Article by Zhang Naitong [1728 0035 6639] and Zhang Zhongshao [1728 0022 0340], both of Harbin Institute of Technology: "A Method for Analyzing and Designing Traffic of Signalling Channel on Mobile Telephone Systems"]

[Summary] A method of analyzing traffic of signalling channel is discussed. Specifically, a method for designing a signalling channel working with the queuing model is presented. Finally, a program for computer simulation is described and some conclusions are given.

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CSO: 5500/4198

PEOPLE'S REPUBLIC OF CHINA

BRIEFS

PRIVATE TELEPHONE SWITCHBOARD OPENED—Beijing, 16 March (XINHUA)—Beijing's first private telephone switchboard opened earlier this week to help improve services. Run by retired electron valve worker Yao Qingling and her husband in their home, it can serve 200 extensions. Yao offers her 122 subscribers round-the-clock domestic and international calls, morning calls and an answering service. She provides her subscribers with telephones and collects monthly rent. After paying her two operators, Yao expects to make 120 yuan (about 42 U.S. dollars) every month this year. Phone shortage is a major Beijing headache. Most of the city's 340,000 phones are in government offices. Few of the 9,450,000 residents have private phones, and the 126,000 lines are often engaged. Though the municipal authorities built and enlarged 15 telephone exchanges and installed 23,000 telephones last year, the demand for telephones is increasing all the same. Yao has been greatly encouraged by municipal authorities. They sold her equipment at a preferential price. A local telephone exchange helped her install the telephones. Her switchboard now has eight outside connections. Yao's switchboard signals relief for some, and even the luxury of an after-dinner chat. She has a waiting list of 100. [Text] [OW160312 Beijing XINHUA in English 0219 GMT 16 Mar 85]

'TELEPHONE RUSH' IN RURAL, URBAN AREAS—Beijing, 30 March (XINHUA)—Demand for information has brought about a "telephone rush" in urban and rural China, says today's "Economic Daily." Over 7,000 rural families have installed telephones, and some 500 villages have set up switchboards. Over 300,000 families and workplaces have applied for telephones. Shanghai has 1,500 private applicants a month. Although China added 370,000 new lines last year, applicants outnumber new phones. There are 40,000 applicants in Beijing this year compared to 30,000 last year. Peasants, especially in coastal areas, are most interested. One village in Sanyuanli outside Guangzhou has with the Guangzhou Telecommunications Bureau set up a long-distance and urban telephone and cable office. China has nearly three million telephone lines in operation. [Text] [OW301212 Beijing XINHUA in English 1151 GMT 30 Mar 85]

MORE WIRELESS TELEPHONES SCHEDULED—Beijing, 6 April (XINHUA)—China is producing 130,000 pieces of mobile telecommunications equipment this year, compared to 80,000 last year, according to the Electronics Industry Ministry today. The ministry can produce such facilities in 12 categories, of 100 specifications. On display at an ongoing exhibition of mobile telecommunications facilities sponsored by the ministry are more than 800 exhibits. Included are wireless telephones, radiophones, pagers, automatic dialing systems, wireless telephones, digital remote-testing equipment and miniature radio transmission facilities. [Text] [Beijing XINHUA in English 0603 GMT 6 Apr 85 OW]

NEW TELECOMMUNICATIONS CABLE--Chengdu, 1 Feb (XINHUA)--A telecommunications cable consisting of 12 optical fiber cores, has passed standard tests in this capital of Sichuan Province. The cable allows 2,800 simultaneous telephone calls, double or treble the capacities of those at present in use in Shanghai, Beijing, Wuhan, Nanjing and Tianjin. Optical fiber telecommunication was developed in the 1970's and designated as one of China's 38 key research projects in the 1981-1985 plan period. The cable was developed by the research institute No 5 of the Ministry of Posts and Telecommunications. [Text] [Beijing XINHUA in English 0210 GMT 1 Feb 85]

SHANDONG'S WEIFANG BROADCASTING STATION--Weifang People's Broadcasting Station in Shandong Province was put into operation on 1 February. The station works for 7 and a half hours a day. [Summary] [Jinan Shandong Provincial Service in Mandarin 2300 GMT 31 Jan 85 SK]

LIAONING POSTAL SERVICE--This year, Liaoning Province will invest more than 120 million yuan in fixed assets in postal and telecommunications departments, 2 times that of the 1984 figure. Construction of the Shenyang key postal building and the Dalian key postal center will begin this year. [Summary] [Shenyang Liaoning Provincial Service in Mandarin 1030 GMT 10 Feb 85 SK]

SATELLITE STATION ANTENNA--The first large antenna system for a satellite communications ground receiving station, designed and developed by China, recently passed technical inspection. Its successful development has filled a gap in China's antenna technology. [Text] [Beijing Domestic Service in Mandarin 1200 GMT 14 Feb 85]

PHONE EXCHANGES FROM ERICSSON--Ericsson has received four orders, totaling approximately 160 million kronor, for delivery of AXE telephone exchange systems to four Chinese towns. Thus, China has ordered more than 100,000 AXE lines. The last four orders include AXE equipment for Beijing and three of the so-called open coast towns in China. [Text] [Stockholm SVENSKA DAGBLADET in Swedish 15 Mar 85 p 29] 8952

SHANDONG TV RELAY STATIONS--Since completion of the first TV relay station in Taian City, Shandong Province, on 1 July 1983, this city has built another 16 TV relay stations. The construction of these TV relay stations enables one fifth of the residents to enjoy two sets of programs. [Summary] [Jinan Shandong Provincial Service in Mandarin 2300 GMT 10 Apr 85 SK]

CSO: 5500/4135

VIETNAM

BRIEFS

HUNGARY RADIO, TV COOPERATION—Hanoi, VNA 14 April—Minutes of a program of cooperation for 1985-87 between the Vietnam Radio and TV Commission (VRTC) and the Magyar Radio Televizio (MRT) were signed here today. Signatories were Tran Lam, director of the VRTC, and Mihaly Cordinez, member of the Hungarian Socialist Workers' Party Central Committee, director of the MRT who is heading a MRT delegation on a current visit here. Hoang Tung, secretary of the Communist Party of Vietnam Central Committee, today received the Hungarian guests. Present were Le Guy, vice director of the VRTC and Hungarian Ambassador Bela Benyei. Hoang Tung highly appreciated the cooperation and mutual assistance between the radio and television services of the two countries and expressed his gratitude to the MRT's assistance. [Text] [Hanoi VNA in English 1541 GMT 14 Apr 85 OW]

CSO: 5500/4324

ARGENTINA

OFFICIAL SAYS ENTEL LACKS RESOURCES FOR NEEDED EXPANSION

Buenos Aires LA VOZ in Spanish 1 Mar 85 p 8

[Text] Cordoba. The administrator general of ENTEL [National Telecommunications Company], Manuel Hector Garcia, stated here that while the agency's potential market all over Argentina "is enormous, at the present time ENTEL can not pursue an aggressive policy to expand its services, given the stagnation of recent years. This has caused us to review our entire policy orientation."

Garcia, who was visiting Cordoba accompanied by high-level officials of the state company, told the press that "we now have nearly 1 million orders for lines pending, and during 1985, we estimate that we will be able to install about 100,000 new telephone lines."

He added that there are 2,800,000 telephones installed, which is a percentage of 9.3 for each 100 inhabitants, while in more advanced countries like the United States, "that percentage is 45 or 50 for each 100 persons."

Garcia indicated that "ENTEL is at this time a self-supporting state firm, but its own resources are not sufficient to finance the development we would like." He said that "the cost of each line is about \$2,000 or \$2,200, and we would need about \$6 million to handle our service requirements."

"It is certainly a business that can make a profit," he admitted, "but there are a number of factors involved, given today's situation, that are forcing us to adapt the company's activities to circumstances. At this time rates are not high enough to cover our services," he said, "and in comparison with 1978, there has been a loss of nearly 60 percent in real terms."

7679

CSO: 5300/2057

ARGENTINA

BRIEFS

NEW TELEPHONE EXCHANGES--The governor of La Rioja, Carlos Saul Menem, and the administrator general of ENTEL [National Telecommunications Company], engineer Manuel Hector Garcia, yesterday signed an agreement for the installation of new telephone exchanges in La Rioja province. The contract covers the construction of new buildings; installation of automatic equipment; expansion of the household distribution system; connection with the National Automatic Dialing Network; and the installation of telephone equipment for customers. The schedule for the work will be prepared within 30 days following the signing of this agreement. [Text:] [Buenos Aires CLARIN in Spanish 16 Feb 85 p 21] 7679

REGIONAL OFFICE IN TRELEW--ENTEL yesterday confirmed the creation of its Patagonian Regional Office in Trelew. It will be staffed by officials and employees who will be transferred there from Bahia Blanca. A statement signed by Horacio Juan Safons, secretary general of ENTEL, reported that the staff "will be composed of suitable personnel, with a minimum staffing level to ensure the smooth operation of the recently created office." The statement added that the present Southern Regional Office located in Bahia Blanca will remain open. It will be operated under the direction of an official who will temporarily report to the Patagonian Regional Office. Finally, the statement reported that detailed studies will be begun shortly to determine their respective geographic areas and areas of competence, in order to achieve balance and to optimize the operation of ENTEL's services, giving consideration to regional economic interests. [Text] [Bahia Blanca LA NUEVA PROVINCIA in Spanish 15 Mar 85 p 3] 7679

RADIO-RELAY SYSTEM DEDICATED--The National Telecommunications Enterprise has dedicated a radio-relay system joining the Cordoban localities of Oliva and Colonia Almada. The system will improve telephone communications between the two towns. [Summary] [Buenos Aires Domestic Service in Spanish 2300 GMT 21 Mar 85 PY]

CSO: 5500/2062

BRAZIL

BRASILSAT BEGINS TRANSMISSIONS ON 1 APRIL

PY000355 Brasilia Domestic Service in Portuguese 2200 GMT 1 Apr 85

[Text] The Brasilsat satellite has started transmitting television signals. Elvesio Gilson, president of the Brazilian Telecommunications Company (Embratel), has said that telecommunications in the country are changing:

[Begin recording] Today, Brazil won its independence in telecommunications. We are no longer dependent on the Intelsat satellites. There are no more long distances or geographic barriers. All points of the country can be linked by telecommunications.

Telephone communications to Manaus will be made via Brasilsat as of 18 April. All antennas will be operating with the Brasilsat for telephone, telex, television, and data transmission by mid-May. [end recording]

According to Gilson, as of today the signals of the Bandeirantes and Globo television networks are being transmitted via the Brasilsat as well as the Intelsat. As of 31 May, the Brasilsat will be the only one to transmit the signals of the two television networks.

CBO: 5500/2056

REGIONAL AFFAIRS

ARAB PENINSULA FORGES AHEAD WITH TELECOMMUNICATIONS PROJECTS

Frankfurt/Main FRANKFURTER ZEITUNG/BLICK DURCH DIE WIRTSCHAFT in
German 4 Mar 85 p 2

[Text] New investments have been noted lately in the area of telecommunications in all the Gulf Emirates (Kuwait, Bahrain, Qatar, and United Arab Emirates), the Kingdom of Saudi Arabia, the Sultanate of Oman, and Jordan. International equipment companies, German ones among them, received significant orders for realization of individual projects. In addition, Arabic countries are going to get an indigenous telecommunication system based on two telecommunication satellites and their corresponding ground organization.

The Arab Fund for Economic and Social Development (AFESD), which is registered in Kuwait, granted Bahrain credit for three million Kuwait (1 Kuwait dinar = about 10.40 DM) at the end of 1984 to cover the Bahrainian share of financing the Gulf Marine Cable Project. This refers to the laying of a 520-km sea cable between Bahrain and Kuwait with a capacity of 1,200 telephone lines. This is expected to be completed by 1988. The plan, whose cost is estimated to be 14 million Kuwait dinars, will be financed in equal parts by both countries.

The Bahrain Telecommunications Company (Batelco) recently gave ANT Telecommunication Technique GmbH, in Backnang, a contract worth 1.5 million DM. The contract went to their electro-acoustics section in Wolfenbuettel for delivery of "Cityfon", a public personal paging system. This system is supposed to be integrated with Bahrain's public telephone and telex network. First of all, during the initial phase, the northern part of the island state is to be covered by a transmission network. Later it is to be extended to the southern part too. ANT already delivered a "Cityfon" system to Riyadh, the Saudi Arabian capital.

A short time ago, the two Japanese companies NEC Corporation and Sumitomo Corporation booked an order from Kuwait for 13 billion yen for delivery of a mobile telephone system to the indigenous Mobile Telephone Systems Corporation. This is to be installed by the end of 1986. Among other things, the mobile telephone system includes two switchboard units for 15,000 car telephones.

Siemens Ag of Munich/Berlin lately concluded a significant contract in the Sultanate of Oman for the expansion of the telecommunications system, reportedly worth 220 million DM. This involves delivery of digital telephone exchanges for 62,000 customers, transmission systems, and a series of local cable networks. In addition, broadband radio relay stretches were installed to take advantage of solar energy. These bridge thousands of kilometers. This order, which was completed in 22 months, was placed by the state-run General Telecommunications Organization (GTO).

In the field of telex traffic in Saudi Arabia, Siemens AG and the German Telepost Consulting GmbH (Detecon) of Bonn dominate. Detecon is an association of businesses formed by the German Federal Post Office, the German Bank AG, the Bank of Dresden AG, and the German Construction and Merchant Bank. The last large order for Siemens AG (in the area of communications technology) involved a large-scale electronic data transmission system installation (4,000 connections to the system). The central is in Dammam. The Saudi Arabian telex network is operated and maintained by Detecon, which has assumed numerous additional jobs in Saudi Arabia.

Krone GmbH of Berlin received in the fall of 1984 a significant order from Jordan for delivery of 100,000 telephones (the pushbutton kind that is also used by the German Federal Post Office). The major part of the consignment is, according to Jordan's requirements, designed for multiple frequency dialing. Thus, it permits the use of existing electronically switched telephone network.

By the end of 1985, Kabelmetal Electro GmbH (KE) of Hanover is expected to wrap up an order in Kuwait for 138 million DM. The contract involves extension and renewal of parts of the telephone network. The plan covers, among other things, construction of cable shafts, laying of conduit for cable, and repairs to the existing network.

The Swedish LM Ericsson Telefonaktiebolaget of Stockholm last year received an order from the Sultanate of Oman for \$17.7 for delivery of car telephones for the exchanges around Muscat (the capital), the coast of Batinah, the city of Salalah, and the areas of the interior. The first phase of installation of car telephones (4,500 units) is to be completed this year. In the second phase, all other parts of the country are to follow.

When a European Ariane-3 rocket successfully took off from Kourou (French Guyana) at the beginning of February 1985 and the telecommunication satellite Arabsat 1 was inserted into orbit according to plan the Arabian countries' dependence on the International Satellite Communications Organization (Intelsat) ended. The Arab Satellite Communications Organization (Asco), to which 22 member nations of the Arabic League belong, now has at its disposal its own telecommunication system. This system will be completed by the satellite Arabsat 2 at the end of May 1985. It is to be stationed above the earth by a space shuttle from the United States.

Two ground stations control the Arabsat satellites during their seven year planned life span. One of the two ground stations is in Dirhab, about 40 kilometers from the Saudi Arabian capital of Riyadh, and the other one is

close to the Tunisian capital of Tunis. Both installations were supplied and installed by the Japanese NEC Corporation of Tokyo. Its maintenance was assumed by technicians of the French firm Aerospatiale of Paris. The value of this maintenance contract, which has a term of two years, is indicated to be \$13.1 million. Moreover, Aerospatiale and the U.S. firm Ford Aerospace and Communications Company received a contract for construction of the two telecommunications satellites at a value of \$134 million.

Also, two tracking stations were set up in Bahrain and Jordan by the Japanese NEC Corporation. NEC also booked orders for construction of earth terminals in Morocco, Algeria, the Sudan, Syria, the United Arab Emirates, and South Yemen. The Italian group Consorzio per Sistemi di Telecomunicazione via Satelliti (STS) was tasked with construction of earth terminals in Oman and Somalia. The French firm Telspace received orders for construction of earth terminals in Djibouti and Mauritania. A short time ago, Iraq received credit from the Arab Fund for Economic and Social Development (AFESD) registered in Kuwait. The credit is to be used for construction of an earth terminal in Latiya, south of Baghdad. No invitations for bids have yet been arranged for earth terminals in Lebanon, Libya, and North Yemen.

Both telecommunications satellites are to operate in C-band. They are to be capable of carrying 8,000 telephone calls simultaneously as well as seven television programs, or a corresponding number of telex transmissions and screen texts. In addition, television programs can be transmitted in S-band for parabolic antennas with a diameter of about three meters. In this way television reception is made possible even in remote areas. The total expenditure for the Arabsat project is estimated at about 500 million Dollars.

12521

CSO: 4620/28

BANGLADESH

SOUTH ASIAN REGIONAL TELECOM MEET ENDS IN DHAKA

Dhaka THE BANGLADESH TIMES in English 28 Feb 85 pp 1, 8

[Text] The three day SARC seminar on telecom network concluded on Wednesday identified the problems of telecommunication sectors in the member countries as homogeneous.

The seminar suggested better coordination in exchanging information and experts to solve the problems.

It adopted a 10 point recommendations, which would be submitted to appropriate level for consideration and implementation.

Briefing newsmen on the seminar, Kin Abdur Rouf, Chairman of Bangladesh T&T Board, said the seminar recommended that the possibility of providing tunnels for laying cables should be considered seriously by the SARC countries. He said, 60 percent of total faults in the telephone systems arisen from the cables, and these could be solved by passing cables in the tunnels.

The seminar recommended that feasibility study should be undertaken before going for planning for conversion from analogue to digital transmission network. Priority for embarking on digitalisation in different parts of the network should be based on consideration of immediate economic benefit. For junction working in a multi-exchange area, use of digital microwave links or optical fibre system should be entirely based on economic consideration, the seminar recommended.

It recommended that in view of successful use of solar energy in the world and particularly in some of the SARC countries, emphasis should be given on its use for telecom network, specially for rural areas.

Mr Rouf said that Bangladesh would examine the feasibility of using solar energy for telecom network. If it was found economical to the conventional energy, then "we must go for it", he said.

The seminar recommended for the use of computer for planning, maintenance, accounting, billing, data base and MIS should be initiated. It also recommended for establishing a data base for efficient planning and operation.

CSO: 5550/048

BANGLADESH

INFORMATION MINISTER INAUGURATES REGIONAL WORKSHOP

Dhaka THE BANGLADESH TIMES in English 11 Mar 85 pp 1, 8

[Text] Mr. A. R. Yusuf, Minister of Information, Civil Aviation and Tourism, inaugurated a five-day regional workshop on "economic reporting", sponsored by the Organisation of Asia-Pacific News Agencies (OANA) and Press Institute of Bangladesh at the PIB premises on Sunday.

Speaking on the occasion, the Minister underscored the role of the mass communication in making the international community aware of the existing imbalance and ever widening disparity and inequality between the developed and developing countries.

He said many significant changes have taken place in the field of international relations during the past few decades. Rapid development of technology and its monopoly ownership by a few industrialised countries had led to the concentration of wealth in a few hands. This ever widening disparity and inequality has made the developing countries dependent on the developed ones, he said.

The Minister said there had been discussions and conferences in the developing countries for the establishment of a new international economic order to remove this structural imbalance.

The Information Minister said that the national news agencies and newspapers should pay a greater attention to the activities and problems in the rural areas and to reflect the hopes and aspiration of the rural people. In this context, Mr. A. R. Yusuf referred to the decentralisation of administration and said about 500 upazilas have become the centres of administration and focus of development activities at the village level.

The inaugural function was also addressed by Mr. Obaidul Haq, Chairman, PIB, Mr. A. B. M. Musa, Director General of PIB and Mrs Mohammed Hashim Makaruddin, course director.

CSO: 5550/0050

BANGLADESH

BRIEFS

NEW TELEPRINTER LINK—Gopalganj, Mar. 9:—Gopalganj was connected with Dhaka with the installation of a teleprinter machine at Gopalganj yesterday. Direct telecommunication service between Gopalganj and Dhaka has been opened. The technicians of the T & T Department have installed the machine within 24 hours. [Text] [Dhaka THE BANGLADESH OBSERVER in English 11 Mar 85 p 11]

C80: 5550/0049

INDIA

VOA TRANSMITTER POSES STRATEGIC DANGER TO AREA

Bombay THE TIMES OF INDIA in English 6 Mar 85 p 8

[Article by Jasjit Singh]

[Text] **T**HERE have been reports in the press about the possibility of an ELF (extremely low frequency) system being part of the Voice of America (VOA) high-powered transmitting station being established at Chilaw on Sri Lanka's west coast. If true, this has serious implications for strategic balance and super power conflict in the Indian Ocean besides grave environmental hazards of radiation to the population in and around the VOA transmitters.

The U.S. and Sri Lanka had signed an agreement in December 1983 for the establishment of six VOA transmitters with a total capacity of 2,500 KW, making it the largest radio transmitter outside the United States. Unlike the 1951 agreement between the two countries, establishing three transmitters of 35 KW each, the present agreement allows the U.S. to "install associated communication and operation facilities" and the station will be manned by an unspecified number of U.S. personnel for at least seven years. Unlike the previous deal, the present one makes the U.S. responsible for the administration, operation and maintenance of the facilities, implying presumably that Sri Lanka would have no control or access to the facility spread over a 1,000 acres.

Strategic and space warfare are critically dependent on secure and timely communication systems. The U.S. relies heavily on its submarine force for first-strike as well as follow-on strikes in its nuclear strategy. The survival of communications during a nuclear conflict is vital to the command and control of strategic forces, thereby virtually controlling the ability to conduct a nuclear war itself. At the same time secure and rapid

communications with the most vital of U.S. strategic triad — the nuclear armed submarines — is a pre-requisite for the credibility and efficiency of the system.

Important Link

One of the most important links in the complex network of the U.S. communication system, including satellites, relates to the strategic submarine fleet. Because regular radio waves do not penetrate into the oceans, maintaining contact with submarines poses special difficulties. Ordinarily, submarines could raise an antenna to the surface but that reveals their position. Very-Low Frequency (VLF) wave-lengths, however, can penetrate the ocean to a depth of 10-15 metres and allow communications without compromising survivability too much. The U.S. uses a network of VLF stations around the world (believed to include facilities at Diego Garcia, and in Australia amongst others) in the U.S. navy's fleet broadcasting system for submarine communications. Redundancy is provided for by eighteen specially equipped Lockheed C-130 Hercules aircraft trailing eight km. long VLF antennas in the air. Airborne patrol are, indeed, continuously in flight.

However this elaborate communication system is still cumbersome, susceptible to jamming etc. and poses risks to the security of nuclear-missile submarines, especially because the communication link is completed only when the submarine has an antenna near the surface. On the other hand, technology is making it feasible to detect submarines submerged at shallow depths. The submarines must also significantly reduce speed to less than eight kmph. for effective VLF communication as the

depth increases to even 10 metres or so. The only available frequency for reaching submarines which are travelling at cruising speed and at operational depth is Extremely-Low Frequency (ELF). Although ELF transmits messages at a slow rate, it would be able to reach a submarine at all times. This capability is vital for any first-strike strategy as well as part of the U.S. Strategic Defence Initiative (popularly referred to as Reagan's "Star Wars"). ELF penetrates water hundreds of metres and is virtually unaffected by nuclear blackouts and jamming, thus providing the only sure method of communication with nuclear-missile armed submarines for follow-on strikes.

Significant Hazard

The U.S. navy started researching ELF in 1958; and an ELF test facility has been functional at Clam Lake, Wisconsin, since 1969, with the system hooked to the navy's communication system. To create a proper operational facility, the navy has been proposing a number of projects in Wisconsin which failed to mature due to public apprehensions about the possible harmful physical and environmental effects.

The upper peninsula of Michigan was then chosen as the likely site for the project — code-named "Seafarer" especially because the underlying layers of low-conductivity rock makes that portion of the U.S. particularly suited for ELF transmission by providing geological resonance.

The governor of Michigan tried to veto the installation in 1977; and in 1978 President Carter ordered termination of the project in deference to opposition on environmental grounds.

The U.S. navy is now proceeding with an extensive programme in Michigan under a revised name, Project ELF, scheduled to be completed in 1983. This smaller-scale ELF system would cover only the north Atlantic and eastern Pacific Oceans and provide communications at reduced data transmission rate of less than one word in five minutes. Communications with submerged submarines in the western Pacific, and Indian Oceans is not possible with Project ELF. Improving the power and size of the system, even in another location in the U.S., would only improve the data transmission rate, and would not extend the coverage. However, in case of strategic warfare, it is essentially these areas which could prove crucial. A comparable (or a set of less powerful) installation would be required in the Indian Ocean region. Diego Garcia simply does not have adequate land for even a small ELF station and has the additional problem of interference with other communication systems on the densely packed island. Australia would appear to be another option. In fact, as early as 1970, Bob Cocksey, a

lecturer in international relations at the Australian National University presented evidence that the so-called "weather station" near Alice Springs in the northern territory was actually an ELF facility.

And now comes the report of plans for possible ELF installation in Sri Lanka! On the face of it, the area of the proposed VOA location would appear to be too small to accommodate anything but a small ELF facility. However, it could cover significant areas of the Indian Ocean and pose a significant environmental hazard to the island.

Critical Role

Secure ELF communications with ballistic missile submarines in the Indian Ocean would constitute a critical link in strategic nuclear conflict in which the U.S. may get engaged. Its importance in relation to time-sensitive targets is even greater, and thus constitutes a pre-requisite for "first-strike" nuclear strategy. The necessity and role of ELF communication coverage of the Indian Ocean have to be understood also in the context of the space warfare strategy of the United States.

The U.S. is developing a conventional warhead equipped with miniature homing vehicle as one of the most promising anti-satellite (ASAT) weapons. Trial firings

from USAF F-15 Eagle fighter aircraft have already been carried out. The warhead could also be launched on Trident-I or Minuteman submarine-launched missiles to destroy satellites at very high altitudes of 24,000 km. or more. Anti-satellite operations would be time-critical and ELF communications with ASAT missile-armed submarines would be critical to the success of the operation.

The U.S. Strategic Defence Initiative also visualises destruction of Soviet ICBM during the "boost-phase" which means the first five or six minutes after the launch, and before the ICBM has had time to disperse and disperse its multiple nuclear warheads, one of the techniques being developed is that of "pop-up" attack. This, in essence, means launching a light, high-speed interceptor missile which would explore a small nuclear device at nearly 1,000 km. altitude. The nuclear explosion would be employed to focus X-ray laser onto the hostile ICBM which by that time could be around 200-300 km. above the earth still in the boost phase. The dynamics of time and distances for such a highly time-critical interception/destruction would require the interception missile to be launched from a submarine in the north-west Indian Ocean i.e., the Arabian Sea. A small ELF facility in the region could provide the necessary secure, automated and timely communication to the submarines submerged at its operation depth and speed. The system, of course, would be backed by the VLF and other communication systems at Diego Garcia, Masirah (Oman) and the U.S. central command HQ in the region.

If the press reports are true, this brings superpower confrontation and possible nuclear conflict to India's doorstep.

BRIEFS

ANTENNA MOUNTS FOR LAUNCH CENTER—MADRAS, March 7--The State-owned Tamil Nadu Small Industries Corporation (TANSI) has bagged an order to manufacture "antenna mounts" for the Sriharikota Satellite Launch Centre. The Department of Space has entrusted the job to TANSI after fully satisfying itself about the unit's capability to manufacture the precision equipment according to strict quality specifications and time schedule, according to the Chief Secretary, Mr. K. Chockalingam. The antenna mount, will be capable of swivelling in all directions to facilitate rotation of the 10 mtr antennas discs mounted on top to track the satellites. TANSI is to supply two such mounts at a cost of Rs. 18.4 lakhs by August. TANSI has, in the past, done some work for the Space Department for smaller items. Apart from this major order it will also manufacture a shroud assembly at a cost of Rs. 9.6 lakhs for the Polar Satellite Launch Vehicle at the Vikram Sarabhai Space Centre at Trivandrum. [Text] [Madras THE HINDU in English 8 Mar 85 p 12]

ORISSA TELEVISION TRANSMITTER—Cuttack, March 11 (UNI)--Vast areas of coastal Orissa have been brought on the country's television map with the new high-power 10-KW transmitter in the city becoming operational yesterday. Doordarshan officials today said trial relay of Delhi programmes through the new transmitter started yesterday and, consequently, the 100-watt low-power transmitter at Bhubaneswar had been put out of action. The new transmitter is atop a 150-metre high tower and has a telecast radius of 120 km and can also exceed 150 km in some fringe areas. Major towns like Puri, Pipli, Konarak, Khurdha, Jatni, Nayagarh, Athgarh, Dhenkanal, Talcher, Angul, Kendrapara, Paradip, Jagatsinghpur, Jajpur, Chandbali, Bhadrak and Anadpur will receive the relay from the new transmitter. The relay from the transmitter is expected to overcome frequent interferences by Sri Lanka's Rupvahini telecasts on channel eight, the same as that of the Bhubaneswar transmitter. [Text] [Calcutta THE TELEGRAPH in English 12 Mar 85 p 5]

SECOND TV CHANNEL--The government has approved the second channel for the Bombay and Madras TV centers. The Minister of State for Information and Broadcasting, Mr V. N. Gadgil, said this in a written reply in the Lok Sabha today. He said the Madras second channel is expected to start by the end of this year. One of the studios in Madras is being equipped to produce programs in color during 1986-87. [Text] [Delhi Domestic Service in English 1530 GMT 15 Apr 85 BK]

PAKISTAN

BRIEFS

ASIA-PACIFIC BROADCASTING UNION MEETS--The special working party meeting of the Asia-Pacific Broadcasting Union began its deliberations in Islamabad today to coordinate the views of the member-countries on the allocation of high frequencies for short wave broadcasting. The 4-day international meeting was inaugurated by the chairman, Pakistan Broadcasting Corporation. Inaugurating the meeting, he urged the participating countries to evolve a workable plan for the distribution of short wave frequencies which could best serve the interests of the Asia-Pacific region. At present, there is no plan for the equitable use of these frequencies and the result was chaotic uses of short wave frequencies. Therefore, a scheme for equitable sharing of limited frequencies by all countries, he said, is needed to ensuring minimum degrees of mutual interference. The conference has been organized by the Pakistan Broadcasting Corporation and is being represented by delegates from India, Japan, Iran, Asia-Pacific Broadcasting Union, and European Broadcasting Union. [Text] [BK221735 Karachi Domestic Service in English 1005 GMT 22 Apr 85]

CSO: 5500/4728

BENIN

BRIEFS

EXPANSION OF TELEVISION NETWORK—The head of state this afternoon received His Excellency Francois Gendreau, the French ambassador, and Claude (de Peron), adviser to the director general of Thomson International, in audience. Their discussions with the president of the republic centered on the discussions that Mr (de Peron) had with our minister of information and communications. [Begin Gendreau Recording] Mr (Peron), adviser to the director general of Thomson International, is currently in Cotonou and was received in audience yesterday by the head of state. They discussed a project for the expansion of the television network to cover the entire country. This will involve the creation of four relay stations whose transmission will cover the entire country. The president instructed the Thomson adviser to study this project with the various Beninese ministries concerned with this project. The president invited me to be present at the presentation of the progress report of this project. A technical mission will arrive very soon in Benin to put finishing touches to this technical cooperation between the People's Republic of Benin and Thomson International. [End recording] [Excerpt] [Cotonou Domestic Service in French 1930 GMT 5 Apr 85 AB]

CSO: 5500/127

GUINEA

FRG MODERNIZES NATION'S RADIO, TELEVISION BROADCASTING

Conakry HOROYA in French 2 Mar 85 pp 3,4

[Article by Mamadou Saliou Balde: "Modern Equipment for Guinea Radio and Television"]

[Text] On Thursday, 28 February 1985, the esplanade of the Palace of Nations was the scene of the ceremony of the official turning over of the radio and television equipment that is part of the modernization of Guinea Radio and Television (RTG), a modernization undertaken by the FRG, whose Office of Technical Cooperation (GTZ) has been on the scene since 1982.

In the absence of Capt. Mohamed Traore, member of the Military Committee of National Recovery (CMRN) and minister of communication and tourism, it was Herve Vincent Bangoura, secretary of state for PTT, who presided at the event. At the occasion, he said that "nothing could better demonstrate, in concrete terms, the sincere desire for cooperation between the Republic of Guinea and the FRG in regard to communications."

Also present were the FRG ambassador, His Excellency Truhart, accompanied by his counselor Mr Kuster and several German experts working in Guinea.

Speaking on the occasion, the FRG ambassador at the outset stressed the excellent relations "between our two friendly countries in general, and which are being concretely demonstrated today."

After recalling that Guinea is committed on the path of recovery, the West German diplomat stated: "Encouraged by the broad directions of the policy of the CMRN and the government of the Second Republic, the FRG is ready to accompany Guinea on its road toward a future of peace, stability and prosperity."

Presenting the equipment granted by the FRG and reviewing the GTZ's achievements, the ambassador expressed satisfaction at the good cooperation that the West German experts have received from the technicians and local administrations in carrying out this project, which involves approximately 8 million DM.

Mr Truhart, in affirming that his government continues to devote special attention to the continued development of Guinean radio and television, responded to the expectations of the Guinean side in general and the RTG in particular.

For, as Secretary of State Herve Vincent Bangoura so well put it: "This ceremony of turning over major equipment does not conclude the cooperation between the GTZ and the RTG. Our hope is that this project will go on to a third or even a fourth phase, and why not even a 10th?"

After expressing satisfaction that the potentials for the RTG have increased in a remarkable way, the secretary of state expressed Guinea's hope to see this cooperation continue in the field of expansion of our television in the interior of the country.

Vincent Bangour conveyed to the ambassador and the German experts the government's sincere thanks, then expressed "the ardent hope that the cooperation between our two countries will continue to strengthen for the happiness and prosperity of our two peoples..."

On conclusion of this ceremony, which took place in a celebratory atmosphere, and in the presence of officials of the office of the minister of communications and workers of the RTG, we met West German experts Menzel and Patzelt, as well as the RTG technicians to discuss this equipment that will in future facilitate the task of the RTG.

Begun in 1980 as part of the technical cooperation between Guinea and the FRG, for which the agreement was signed on 18 June 1979, implementation of the project titled "Promotion of Broadcasting" started in 1981 with studies and "installation of what was required."

In 1982, there arrived the equipment and the first expert, Mr Menzel, a telecommunications engineer, who was to proceed, in cooperation with the Guinean technicians, to prepare the necessary installations.

Power: Problem Resolved

Thus, the whole thing began with installation of a 350-KVA generator. It is a complete system that operates continuously and permanently, that is, independent of the national power network. Thus, even when the latter is operating, the project's generator is constantly in service to provide a stabilized voltage. And if the national network has a blackout—which is very frequent in Conakry—the RTG's supply is always assured. It continues to operate thanks to the generator, which a 3-ton flywheel automatically starts, in fractions of a second, so that a watcher, even though prepared, cannot tell the exact moment when the blackout comes and the generator takes over.

How does that happen? If there is power from the network, an electric motor turns the generator. If there is a blackout or simply a fluctuation in current in the network, a diesel engine instantly takes over to operate the generator.

Air-Conditioning

The project developers also installed three air-conditioning units. "Of the three units, two are always operating, with the third in reserve."

Also: "Previously, with only two units, the entire radio part was air-conditioned. In 1984, an additional unit was installed for the television area. Thus, today the RTG's entire technical facility is air-conditioned, and permanently. As Albert Kouloumy, director of domestic technical services and co-leader of the modernization project, stated: "Here also there has been a definite improvement of the system, for not only does the air-conditioning have greater capacity, but the operation is more efficient."

Acoustics

Another beneficial action by the GTZ project as part of the modernization is certainly the renewal of all the acoustics in the technical area: refinishing the walls, necessary insulation, reflooring, etc... In the same category, the doors have been replaced with an automatic-opening system that eliminates the problems caused by closing of rather heavy doors in the various rooms of this labyrinth of the RTG technical area.

Radio Studios: Modern Equipment

At the end of 1982 and the beginning of 1983, the Germans installed equipment for the four radio studios. They entirely changed the existing equipment, whose antiquity needed no comment. "They installed very modern equipment, WCM consoles by ANT, an affiliate of Telefunken, and M15A tape recorders of the same make. This is the latest equipment... The capabilities of this equipment have improved, both qualitatively and quantitatively, the RTG's capabilities. Where we had two recorders we now have three or four. The functions of the consoles are also expanded. The FM link with the Kipe transmitters solves the problems that cable often caused. In short, it can be said that there has been an effective modernization, a modernization that justifies the term," Albert Kouloumy emphasized.

One particularly significant aspect. Since 1983, the project has undertaken on-site training of local technicians and engineers in several essential fields: electrical, air-conditioning and radio. To expand this on-site training and install the infrastructure and equipment for color television (PAL system), the GTZ project sent a second expert in October 1983, Mr Patzelt, a studio TV engineer.

In connection with the training, it should be recalled that back in 1982 the Germans had sent six Guinean engineers for special training: two for the air-conditioning section, two for electrical, and two for the studio section.

Moreover, in order to provide effective and continued technical training, the West German experts and the Guinean side undertook a project to establish a specialized center that would serve as a kind of studio school. With the establishment of this modern center, whose equipment is already in place, the objectives of continuing improvement of skills are feasible.

In the meanwhile, the German technicians have organized several advanced training courses and readily conclude that in Guinea, and specifically in the RTG, "it is on-the-job training that is especially effective." They are making commendable efforts to give our people, all the operating and

maintenance personnel, what they have the right to expect from them. The second phase of implementation of the project has involved updating the recording library room to miniaturize the recordings so as to facilitate use and preservation.

This modernization work has required modification of the construction of the facility as well as the electrical installation and painting. This work is almost finished, and the installation of the listening and reproduction equipment will be done soon, Mr Patzelt stated. This will no doubt expedite the transferral of the regular tapes to "music-cassettes."

Extending the scope of this priority project, the German side in 1984 tackled the television aspect. This was done at the request of Guinea, which is trying to get underway in this field. The Germans also, aware that they are here to help us handle an important field of development, did not hesitate. They modernized the television area, in particular the floor of the room, and the air-conditioning system. And in addition to installing a sophisticated videotape editing studio, they provided the RTG with a color TV reporting van, equipped with cameras. In fact, it is a small mobile studio with two cameras that has everything that you would find in a normal TV studio. The van has a complete production facility: an image mixer, a recorder, all the control and viewing elements, sound production equipment and a power generator on trailer. This makes possible color TV productions, and operating completely independently; that is, independent of the studios and the national power network.

With this van, the RTG, using a microwave system, can now make direct relays.

If you add to all this the radio van, another mobile studio, the two color TV reporting units for the external services, the minibuses for transporting teams of reporters, and the two other utility vehicles, WV vehicles, you have an idea of the importance of this gift, the product of a fruitful cooperation, a Guinean-German cooperation, conforming entirely to our principles, and which will certainly have a positive impact on the national development.

In this connection, RTG Director General Emmanuel Katy stated: "It must be recognized that this German assistance is effective aid, and that the experts implementing it are ensuring that the Guineans themselves master the latest technology that the Germans have introduced.

"Hence, well before the installation of this equipment, they provided training of the Guinean technicians right at the factory that produced the equipment. And these technicians, who were present at the origin, witnessed the installation of the equipment in our studios. That is why, from the generator to the studios, and including the air-conditioning system, it is almost exclusively our personnel who are working there.

"The West German experts are only there for special problems, practical advice. And it should be pointed out that this 'presence' is very discreet.

"In short, the German friends have integrated their actions with those of the RTG, whose technical facilities are henceforth a genuine school where the young Guinean personnel receive a highly valued training.

"Soon, the studio school will also open, thus increasing the opportunity for the advanced training so much desired by all and whose results will certainly have an impact on communication, the essential factor in the economic and social development."

Asked about his personal feeling regarding the GTZ project, Emmanuel Katy said that the RTG management is very gratified that the German Technical Cooperation Office sent to Conakry experts who are competent, friendly and hardworking; experts who do not hide anything in what they do. All this can be summed up in a word by saying that the "GTZ assistance is a friendly assistance."

9920

CSO: 5500/119

IVORY COAST

IVORY COAST, FRANCE SIGN TELECOMMUNICATIONS AGREEMENT

AB291717 Abidjan Domestic Service in French 1245 GMT 29 Mar 85

[Text] Ivory Coast and France have just signed a cooperation agreement in the field of posts and telecommunications. The documents were initiated by Minister Barry-Batesti for our country and by Minister Louis Mexandeau for France. According to Minister Barry-Batesti, this protocol agreement is a continuation of an action which must be strengthened and adapted today in order to render it more functional.

[Begin Barry-Batesti recording] The new protocol of cooperation which we have just signed has two objectives: to reaffirm the principles that have always guided our cooperation and our common desire to implement them in the current phase of developing our posts and telecommunications; to open the way for new posts and telecommunications bureaus and the National Higher School of Post and Telecommunications to enable them to sign agreements at their level permitting the improvement of their operations. I have no doubt that these exchanges will find very favorable grounds for further development because they will be a natural supplement to the ties of friendship and cooperation linking our two countries. This association policy is already bearing fruit because the just signed agreement will be followed up by the inauguration of tele-copying service which will henceforth unite our two countries via this public network starting from the 17th district of the Abidjan post office and this augurs well for our future relations. [end recording]

CSO: 5500/124

7 May 1985

MADAGASCAR

MADAGASCAR, CAR JOIN RADIO-TELEVISION UNION

Antananarivo MADAGASCAR MATIN in French 21 Feb 85 pp 1,2

[Text] Unity is strength. This expression applies especially when it is a matter of "common sense." This was the spirit in which Madagascar and the Central African Republic acted to swell the ranks of the African National Radio-Television Union (URTNA) at the close of its 25th general assembly held a few days ago in Brazzaville, People's Republic of Congo.

Madagascar was represented at the proceedings by Benjamin Rakotoarivelo, research director of the department of equipment and technical infrastructure. Simon Andriamialison, director of Malagasy Radio and Television (RTM), reviewed for us yesterday the ins and outs of this joining of the organization.

There are numerous ensuing advantages. Not the least of these is group purchase of one of the major radio-television relays of sports events (Olympic Games, World Cup football...). For example, according to the figures given us by the director of RTM, the URTNA price for the coming television relay of the World Cup next year in the Mexican capital will be 480,000 Swiss francs, or the equivalent of more than 117 million Malagasy francs (FMC). At any rate, that is the wholesale price. The retail price will amount to more (...).

Broadened Cooperation

However, as Simon Andriamialison said further yesterday, that is not all: "This also enables a broadening of the cooperation among the various member states--there are 43--in the radio and television field, along with the resulting contribution to the development of south-south cooperation that is a cherished objective of the OAU, of which URTNA is one of the specialized bodies. This is also a factor in the international conferences, specifically in allocation of wavelengths."

Moreover, there emerged from the Brazzaville meeting of African radio and television professionals a desire to "tackle together all the issues relating to the broadcaster's activity and to analyze them in depth." The Congo called for measures in relation to "the domination and control of information by free enterprise, so that the member countries would cooperate for a better arrangement."

Negative Aspect

However, there was a negative aspect beneath the surface of these good intentions. In addition to the budget deficit of \$3,000 in the 1983 budget year (or about 2 million FMG) there is the rise in the dollar and the failure of some member states to pay their dues. Hence the decrease of almost 8.33 percent in the budget estimates for the current year in relation to 1984. The 1985 budget was set at \$970,913 (about 63,109,345 FMG) in revenues and expenditures. The current URTNA president, Marcel Ndione, has called on all member countries to settle their delinquent payments, otherwise "all these discussions will be in vain if the necessary tool, URTNA, does not have the means to act."

A Center of Inter-African Studies of Rural Radio (CIERRO) was established as a result of the proceedings. Malian Ousmane Toure, a 39-year-old journalist, was named to head it. Meetings are planned for next year in Senegal and Algeria. They will deal with problems relating to production and coproduction. Congo and Gabon have been assigned the task to complete the study on the "data bank."

Incidental to these proceedings, Congo was awarded first "Radio" prize. The host People's Republic of Congo received second "Television" prize.

Next year's URTNA 26th general assembly will be held in Libreville, Gabon.

9920

CSO: 5500/119

MADAGASCAR

BRIEFS

GTE-EARTH STATION--Communications. GTE has been selected to design and install on the island a communications earth station that represents one of the first applications of an INTELSAT satellite in direct support of natural resource exploration. Under contract from Amoco Production Co., Houston, Texas, GTE International Systems Corporation will provide a Standard D-1 (5m) station that offers low-cost telephone, telex and data communications via an INTELSAT V satellite in synchronous orbit over the Atlantic Ocean. From Antananarivo, the island's capital, two-way traffic will travel to a COMSAT station in Andover. From Andover messages will be relayed via terrestrial circuits to Amoco's Houston headquarters, representing the first application of INTELSAT's low-density global telephone service, called VISTA. Madagascar, the fourth largest island in the world (241,000 square miles) is believed to possess oil and gas reserves on and off its shores. Amoco has launched a multi-million-dollar exploration program, headquartered in Antananarivo, which is expected to contribute significantly to the nation's economy. The company already has four onshore operations spread over 10 million acres. Seismic activities have been underway for more than a year, and drilling on five wells is scheduled for completion by December 1988. Amoco's exploration teams require reliable and rapid voice and data communications with Houston. [Text] [Paris AFRICAN DEFENCE JOURNAL in English Mar 85 p 38]

CSO: 5500/125

SOUTH AFRICA

BRIEFS

STATION TO ASSIST SATELLITE LAUNCHING—South Africa is to assist with the launching of a French communications satellite next month. The rocket carrying the Telecom I-B satellite is to be launched from near Toulouse in southern France at 0200 on 8 May. A spokesman for the Hartbeeshoek satellite tracking station has told our Pretoria news staff that with the detachment of the satellite from the third and last stage of the carrier rocket, South Africa's task will be to relay data from the satellite to France. The spokesman said it would be possible only from the subcontinent to observe and control the third stage of the mission. [Text] Johannesburg Domestic Service in English 0900 GMT 16 Apr 85

CSO: 5500/130

ZAMBIA

BRIEFS

JAPAN TO PROVIDE MICROWAVE RELAYS—The Posts and Telecommunications Corporation (PTC) and NEC Corporation of Japan yesterday in Ndola signed a K60 million contract for the design, manufacture, supply, installation and commissioning of the microwave radio relay project to cover three provinces. PTC director-general Mr Langston Kavesha signed for his corporation while Mr Iwane Takahara who is associate senior vice-president of NEC Corporation signed for the suppliers. Mr Kavesha said the project which would provide microwave links to Luapula, Northern and Eastern Provinces was being financed by the Japanese government through a loan to the Government from the Overseas Economic Cooperation Fund of Japan. The microwave link to Luapula would not pass through the Pedicle road but would go from Kasama to Mansa via Luwingu in the Northern Province. The link would provide for television channel while spur links would connect Mansa to all districts in Luapula, Mr Kavesha said. [Text] [Lusaka TIMES OF ZAMBIA in English 20 Mar 85 p 7]

CSO: 3400/934

ZIMBABWE

RSA-ZIMBABWE 'AIR WAVES' BATTLE

MB111720 London BBC World Service in English 1515 GMT 11 Apr 85

[From the "Focus on Africa" program]

[Text] A battle of the air waves had developed along the border between Zimbabwe and South Africa. A clandestine radio station called Radio Truth, apparently based in South Africa, has been transmitting broadcasts into Zimbabwe in the Ndebele and Venda languages. Well, now the Zimbabwe Broadcasting Corporation has announced that it is going into battle with Radio Truth by transmitting its own program in Venda.

From Harare, (Michelle Fall) reports.

(Fall) The South African station, which beams vitriolic monologues against Zimbabwe's Government into the country from the northern Transvaal, recently increased transmission into the southern border area in the Venda language. So Zimbabwe Radio is introducing its own Venda broadcasts on two of its four channels. Venda is only spoken by two percent of Zimbabwe's 8 million people.

The language is widely used in the southern area of the border town of Beit Bridge, next door to South Africa, and in South Africa itself, just across the border.

The Zimbabwe Corporation also plans to install two new transmitters in Beit Bridge town to improve its reception there. At the moment, listeners in the district can tune into Radio South Africa and Radio Truth on medium wave more clearly than they can their own Zimbabwe radio stations on FM. South African Radio has one of the strongest signals in southern Africa.

Until now, Zimbabwe Broadcasting Corporation has had programs in four languages--the official English language, and the most popular vernacular languages of Shona and Ndebele as well as Nyanja. Nyanja is the language of Malawians and the country has thousands of workers who have emigrated here from Malawi over the last century.

This week, the minister of state for security, Mr Emerson Munangagwa, said the pirate Radio Truth station has been beaming more and more propaganda into Zimbabwe in all the languages spoken here. A recent survey of Zimbabwe listenership of international radio stations confirmed what has been widely acknowledged that the BBC is the most popular foreign station in the country, but followed closely by the South African Broadcasting Corporation.

CSO: 5500/128

ZIMBABWE

BRIEFS

OFFICIAL NOTES CONSIDERING EXTERNAL SERVICE—The first in-service upgrading course in radio production for Radio 4 of the Zimbabwe Broadcasting Corporation, ZBC, opened in Harare today. The one-month training course is being attended by 20 junior and middle level production personnel. The course is aimed at encouraging producers to develop a greater appreciation of the total social, economic and political context within which they work. The deputy minister of information, posts, and telecommunications, Comrade Naomi Nkhavati, opened the course. She said the government is looking into the possibility of developing external services to counteract information aggression from racist South Africa and other foreign news media which distort information about Zimbabwe. Comrade Nkhavati pointed out that in Zimbabwe, Pretoria is beaming Radio Truth and Radio Venda to some parts of the country in order to divide Zimbabweans and cause instability. Comrade Nkhavati said the ministry plans to develop ZIANA so that it becomes the only news agency disseminating information about Zimbabwe to the international community. She said government attaches great importance to Radio 4, because of its programs which are educational. Comrade Nkhavati said Radio 4 should be developed to cater for mass organization. The opening session was attended by the director general of the ZBC, Comrade (Tirivasi Kangai), ZBC directors, and members of the Zimbabwe Institute of Mass Communications. [Text] [Harare Domestic Service in English 1115 GMT 9 Apr 85]

CSO: 5500/128

SOVIET UNION

TASS ELECTED TO ASIA/PACIFIC NEWS AGENCIES TECHNICAL GROUP

LD302355 Moscow TASS in English 1626 GMT 30 Mar 85

[Text] New Delhi, 30 March (TASS)—TASS special correspondents Vladimir Baydashin, Geliy Skobelev and Georgiy Shmelev report:

The organization of Asia/Pacific News Agencies [OANA] ended its 6th General Assembly here today, which was attended by some 80 delegates and observers from 24 news agencies of 20 countries of the region as well as UNESCO and a number of other international organizations.

The delegates today unanimously endorsed the report of the 6th General Assembly, which drew the balance sheet for the work done by their four-day meeting. They also passed several resolutions, including those on further upgrading the Asia/Pacific News Network (ANN), launching an ANN photo news service and introducing a reduced tariff on the lease of telegraph communications channels and a document in support of the United Nations Educational, Scientific and Cultural Organization.

The OANA General Assembly called on the governments of the countries of the Asia/Pacific region to consider cuts in tariffs on the lease of telegraph communications channels as a matter of urgency to promote free and balanced exchanges of information. As is known, the Soviet Union introduced reduced tariffs on the lease of communications channels as far back as several years ago.

The General Assembly delegates stressed the vitally important role played by UNESCO in promoting a just, free and balanced flow of information and expressed their solidarity with and full support for that organization in its efforts to achieve a new international order in the field of information and communications.

During debates at their full-scale meetings, participants in the OANA forum criticized attempts by transnational information monopolies to force their standpoint on other states and the practices of the West's "information imperialism" and spoke out for establishing a new international information order as soon as possible. Delegates also expressed gratitude in their speeches to the international program for the development of communications for its assistance to the ANN with starting effective work.

During the assembly, OANA admitted its 25th member, the Eastern News Agency (ENA) of Bangladesh.

The delegates elected the OANA governing bodies for the next three-year term. The leading Indian news agency Press Trust of India (PTI) became OANA president, and PTI director-general Narayan Rama Chandran thus became the organization's leader. The OANA executive committee now also includes the news agencies ANTARA (Indonesia), IRNA (Iran), KYODO TSUSHIN (Japan), MONTGOME (Mongolia), APP (Pakistan), KPL (Laos), BERNAMA (Malaysia), and LANKAPUVATH [as received] (Sri Lanka).

The news agencies TASS (USSR) and VNA (Vietnam) were elected to the OANA Technical Group.

Indonesia was selected as the venue for the next OANA general conference.

The General Assembly also passed a special resolution expressing gratitude to the Indian national preparatory committee, first of all the Press Trust of India, as well as the news agencies United News of India, Samachar Bharati and Hindustan Samachar, which had done a large amount of work in preparation for the successful holding of the latest OANA forum.

CSO: 1812/192

SOVIET UNION

MONOPOLIZATION OF WESTERN MEDIA, ELECTRONICS INDUSTRY HIT

Moscow SOTSIALISTICHESKAYA INDUSTRIYA in Russian 3 Feb 85 p 3

[Article by Yu. Kashlev, doctor of historical sciences: "The Disinformation Industry"]

[Text] The rapidly developing mass media and propaganda play an important role in the fierce struggle between two courses of world politics and two ideologies. The level of knowledge of entire peoples and the degree of their mutual trust (or distrust) or, to put it another way, the international intellectual and political climate depend to a large extent on what kind of information is disseminated, by whom and to what ends, daily via hundreds of millions of television and radio sets.

Imperialism's gigantic propaganda machine opposes the mass information agencies of the Soviet Union, of other socialist countries and of progressive developing countries, which support the improvement of the international situation, durable peace, mutual understanding and progress. This machine is composed of tens of thousands of newspapers and magazines, owned by monopolistic financiers, radio and television stations, publishing houses and film companies, as well as government propaganda services set up by bourgeois governments. The processes taking place within this gigantic machine determine (and explain), to a large extent, their ideological line in international affairs.

The main process taking place today in the capitalist countries' information sphere is the growing concentration of mass information agencies in the hands of monopolistic financiers: their continually increasing conversion into an instrument for the intellectual cultivation of the masses in the interests of the ruling class and into a weapon for the struggle against the forces of socialism and progress in the international arena.

In the USA, for example, the process of setting up excessively gigantic firms ("dinosaur companies") in the mass information field has expanded. The largest corporations have more and more begun to stick their hands into adjacent information fields, with the result that there are now giants, which simultaneously possess the most modern means of communication, newspapers and magazines, radio and television stations, and a rapidly developing cable television network, etc. Thus, the biggest transaction of recent times is

considered to be the acquisition of the second-largest cable-television company by the transnational Westinghouse Corporation for \$646 million. A similar picture can be seen in other imperialist countries. In England an absolute majority of the newspapers are controlled by four concerns. In Italy even the large newspapers and magazines are being brazenly bought up by industrial corporations.

The "information industry" in the West is often called the "servant of big business". This is true, and yet not completely true. The fact is that it is not merely the "servant" but an integral part of "big business." The modern "information industry" has all the characteristics of imperialist economics: a high level of property concentration, the most modern equipment, large profits, excessive exploitation of workers, large capital investments abroad, and so on. A number of firms active in the mass communication field are included in the list of the 500 largest U.S. companies, which is published every year.

Advertising is the "umbilical cord", the means by which they are connected with "big business", and through which they receive sustenance. In the USA revenues from advertising amount to tens of billions of dollars, more than many developing countries' national income. Several years ago in Japan 1.14 percent of the cost of all produced goods was spent on advertising; in France 0.8 percent. By means of advertising regulation these countries' upper bourgeoisie maintain or undercut to the root one or the other publication or broadcasting agency.

But even this is not the full picture. In the USA for example, behind the publishing monopolies and the radio and television stations stand even more powerful giants--the so-called electrotechnical corporations, which have monopolized the production of communications and electronic equipment and which, by a system of hidden levers, direct the activities of the mass, information media. According to some calculations no more than 10 percent of the entire communications business falls into the category of news dissemination--that is, what is properly called mass information. The remainder is used for the production of modern equipment (electronic computers, communications satellites, radio and television equipment, and so forth), for research and design work in this area, and even for the production of all sorts of informational and cultural products (movie films, radio and television programs, tape recorders, video equipment, etc.) The budgets of the large corporations, which occupy leading positions in the communications industry, exceed by 10 to 100 times or more the budgets of the world's largest press agencies, the American ASSOCIATED PRESS and UNITED PRESS INTERNATIONAL, which are just the last apparent links of the machine which is protecting the commercial and ideological interests of the American monopolistic bourgeoisie.

On the whole no more than 20 gigantic corporations, mainly American, occupy leading positions in the communications field in the West. It is characteristic of them that practically all of them belong to the military-industrial complex and that they are the military departments' largest contractors. And such a picture is evident not only in the United States. In France the military concern Matra recently bought up the "Achette" publishing company, the largest in Western Europe, lock, stock and barrel.

What kind of information is disseminated in their countries and in the international arena by the propaganda agencies, which are, in fact, controlled by the military-industrial complex?

Without delving into history, let us look at the propaganda situation which is taking shape today around the most vital question of our time--the question of war and peace. Following the example of American political and military figures, the Western countries' mass information media widely disseminated stories about "local" and "limited" nuclear wars, about the possibility of being victorious in them, about the "advantages" of the neutron bomb, which kills people but preserves material valuables, about the "inadequacy" of the reserves of nuclear bombs stockpiled in the USA, and so on.

Turning the truth upside down, the propaganda of the USA and the NATO countries blames the Soviet Union for the arms race, "forgetting" that the USSR has already submitted in all more than 100 serious proposals on disarmament and, in fact, that the USA wrecked acceptance of the majority of them. Just in the recent 39th session of the UN General Assembly the United States voted 26 times against other countries' proposals on the questions of international security and disarmament, doing this 10 times practically in complete isolation. But does the American press really inform its readers about this? No, instead it continues to play the false note about the "Soviet threat."

In the Soviet Union a law was adopted back in 1951 which prohibits war propaganda and which also applies to Soviet foreign policy information. But in the USA the "NEW YORK TIMES" writes that the American concept of "freedom of the press" also implies complete freedom of expression--for the proponents of war. Actually, all of this is in the interests of the military-industrial complex, which derives excessive profits from the arms race.

Most recently, with the military-industrial complex's encouragement, one alarming process is still taking place--the further concentration of mass information media in the hands of those forces which openly oppose the easing of tensions and cooperation with socialist countries. In France, newspaper magnate R. Ercan, a collaborator during the war years with the Vichy regime, has laid his hands on tens of newspapers and magazines. In the USA and in England R. Murdoch, the latter-day information businessman, is doing the very same thing. He even managed to buy the London TIMES. In the FRG Axel Springer, the troubadour of anticommunism, is continuing to expand his holdings. The NEUE ZÜRCHER ZEITUNG wrote that A. Springer is engaged in selling the Cold War and, if he had his way, he would also sell a "hot" war.

The information and propaganda industry in the imperialist countries has long ago been changed into a disinformation industry, into an instrument for cultivating the masses in the spirit of anticommunism and militarism and into a weapon for the struggle against the forces of socialism, progress and peace in the international arena. Exposure of the extremely harmful and dangerous activities of the imperialist propaganda centers is one of the urgent tasks of all people of good will.

EUROPEAN AFFAIRS

NORDIC RADIO DIRECTORS ENVISION COMMON SATELLITE CHANNEL

Helsinki HUFVUDSTADSBLADET in Swedish 13 Mar 85 p 10

[Article by Ernest Uljens]

[Text] Vasa--A common radio channel for all the Nordic countries that would transmit programs via satellite was outlined as a future goal for the broadcasting systems of the Nordic countries by the Nordic radio chiefs and program directors who met in Vasa on Tuesday.

The radio channel referred to would be regarded as a Nordic quality alternative and as a counterbalance to increasing international competition, according to participants at the meeting.

The participants in the Vasa meeting, at which radio companies from Denmark, Norway, Iceland, Sweden and Finland were represented, held a long discussion on Tuesday of the future of radio in the shadow of Tele-X and Nordsat.

"If these become a reality there is a risk that ordinary radio will be forgotten. Therefore in the near future our companies will stress to telecommunications agencies and similar bodies the importance of keeping radio off the sidelines," said program director Bengt Bergman.

At the press conference on Tuesday Bengt Bergman said there were theoretically great possibilities for setting up a common Nordic radio channel that could transmit programs via satellite.

"Of course we will place a priority on the Nordic satellite alternative if Tele-X and Nordsat become a reality. If this system is rejected we are prepared a little further down the road to analyze whether there is a possibility of acquiring transmitting equipment on another existing satellite channel, perhaps in the direction of central Europe," Bergman said.

Mostly Music

Most of the programs sent on the common Nordic radio channel would offer music but other types of program are also possible.

Ove Joanson of Swedish Radio said at the press conference that there is a great value in investing in a Nordic quality alternative to counterbalance the international competition, welcome as that is.

"People in responsible political circles should try to strengthen the Nordic quality alternative," said Ove Joanson. He did not see the proposed common Nordic radio channel as a kind of science fiction vision.

"We know that there will be radio channels on many of the new satellites. We will mainly get new music channels in the Nordic region, primarily from Europe but perhaps from the United States as well. We see it as vital that at least some of these music channels, which will have a perfect sound, are given a Nordic framework. It is not in the cultural interest of the Nordic lands that in 5-10 years all the classical music we can get is produced outside the Nordic cultural area. There should be a great Nordic cultural interest in utilizing the new technology for Nordic music. Therefore it is important that we stay in the foreground from the beginning so that we are not finessed by the West German music satellite, for instance. The risk is that music produced in the Nordic region and Nordic musical life might find things even harder when the competition from Europe becomes more intense," he said.

Radio in the Background?

A Nordic radio channel with programs transmitted via satellite is hinted at in a brief section in the reports on Nordsat. At any rate there is an uncomfortable feeling that radio might be pushed too much into the background. Perhaps that is why things are being articulated more clearly than they were before, according to Bengt Bergman.

He added that no kind of timetable had been discussed in Vasa. The meetings of radio chiefs are informal and without the power to make decisions and the discussions in Vasa should be regarded more as a discussion of principle that will probably be resumed again in the fall when the radio chiefs meet in Iceland. Under any circumstances this involves a long-term process before the potential common radio channel becomes a reality.

"There have been no cost calculations for the radio channel at this stage. We have not made a decision of any kind, the discussions are simply intended to hasten a decision-making process," Bergman added.

One of the unsolved technical problems involved with radio transmissions via satellite is that car radios, for example, cannot pick up the broadcasts. Satellite transmissions need a stationary receiver hooked up to an antenna.

"We think that with regard to stationary radio listeners it is important to set up a common channel on a Nordic basis since we are surrounded by competitors who have little ambition to meet the Nordic cultural goals of the Nordic radio companies," said Bengt Bergman.

Norwegian Radio Via Satellite

Gunnar Gran of Norwegian Radio said at the press conference in Vasa that Norway has some experience of transmitting radio programs via satellite.

"On 22 December last year Norwegian TV started sending broadcasts via the European communications satellite, ECS-2. The programs can be received in Svalbard and on the North Sea oil installations. Norwegian Radio leases a transponder that transmits the Norwegian TV programs to these places every day. The radio network has spent relatively little money here for the transmission of its two programs."

Progress

Jouni Mykkanen of Yleis Radio, viewed the prospective radio channel as a clear sign of progress.

"It is expensive to produce musical programs with big orchestras. With co-operation and satellite transmission the costs of music production could be paid for by 20 million inhabitants. With this system we could send daily concerts from the Nordic capitals and many other cities and make them available for listeners in all the Nordic countries. Satellite transmission could also be used to offer Finnish-language programs to Finns residing in Sweden although the major emphasis would be on producing musical programs."

6578

CSO: 5500/2622

FINLAND

MOBIRA SELLS MOBILE PHONE EQUIPMENT TO CANADA, NORDICS

Radio Phones to Canada

Helsinki HELSINGIN SANOMAT in Finnish 14 Mar 85 p 28

[Text] Mobira Oy enters the Canadian markets with its mobile car telephone equipment. Mobira has entered a distribution agreement for mobile telephones with the Canadian Cantel Inc. In the beginning stage the worth of the agreement is about 14 million.

According to President Silva Nokela "the next year and a half is expected to double the total value of the deal."

As the first company in Canada Cantel Inc. has received a license from the Federal Government to offer a nationwide mobile telephone service. The service of the new mobile telephone network in Canada will begin next summer. In the beginning stages the network will serve Montreal, Toronto, Hamilton and Oshawa.

According to the agreement the first mobile telephones will be delivered already next month. By the beginning of next year the network is planned to be extended to service 23 cities.

Base Stations to Norway, Sweden

Helsinki HELSINGIN SANOMAT in Finnish 21 Mar 85 p 29

[Text] Mobira Oy has closed significant mobile telephone deals with Sweden and Norway. The Oulu factories of Mobira, which belongs to the Nokia Concern, have sold 49 million markka's worth of base station equipment to the neighboring countries. The new NMT-900 system helps meet the rush for mobile telephones in both countries.

Southern Norway and the Stockholm area of Sweden will get about 100 separate base stations. The new mobile telephone system will be taken into use in both countries at the end of next year.

The NMT-900 system functions in a frequency range of 900 MHz, which has at its disposal 1000 channels instead of the 180 channels of the previous 450 MHz system.

The Central Board of Post and Telegraphy has also decided to order over 6 million markkas worth of base station equipment from Mobira. The new mobile telephone system will be in general use in Finland toward the end of next year and the new system will extend to the north of Finland in the beginning of the 1990's.

The rush is caused by an underestimation of the popularity in all the Nordic countries, where there will be 200,000 car telephone subscribers at the end of this year.

"Through the deal Mobira reached a strong position in the base station markets in Norway and at the same time also opened up the Swedish market. There was a tight international bidding competition about the deal," says Eero Wallstrom, manager of the Oulu factory of Mobira.

Last year the Oulu factory of Mobira, which mainly produces base station equipment, recorded the sales to be 3 million markkas. The sales this year have been estimated to be ca. 50 million markkas. As a consequence of the deal the number of workers at the Oulu factory will rise from 120 to 180 by the end of the year.

The entire sales of Mobira is estimated to exceed 650 million markkas this year. Mobira Oy currently employs over 1000 individuals.

9662

CSO: 5500/2620

FRANCE

MATRA DEVELOPS NATIONAL CELLULAR TELEPHONE SYSTEM

Paris ELECTRONIQUE ACTUALITES in French 21 Dec 84 pp 1, 10

[Article by D. Levy: "A Market of 250,000 Mobile Telephones: MATRA is Preparing for the Marketing of the Radiocom 2000"]

[Text] The first French radiotelephone system with national coverage, the Radiocom 2000, developed by MATRA, will go into operation in a few months. Five relays will be delivered to the PTT [Postal and Communications Services] next February and March, and a complete system equipped with the latest version of the software will be operative in spring. During the year, the installation of about 50 relays will follow, while the manufacturer progressively reaches a production pace of 2 relays per week. At the same time as the infrastructure is set up, the marketing of the mobile telephones will begin, eventually representing a vast market of 250,000 mobile units (corresponding to the connection capacity of the 500 relays planned). Various manufactureres will compete for this market, but it is obvious that because of its knowledge of the system, MATRA will have a definite advantage in the competition.

The misfortune of some constitutes the happiness of others.

The failure of the joint Franco-German 900 MHz (in analog) radiotelephone project has removed the uncertainties concerning the compatibility of this system with the Radiocom 2000, thus leaving the field clear for the latter. No new effort in Franco-German cooperation on the basis of digital technology will come up with competitive equipment (in price) before 1990-1992.

The saturation of the current public radiotelephone systems (which limits to 10,000 the number of car telephones) and the explosion in demand led the PTT to place an order with MATRA in 1981 for the development of the Radiocom 2000 system providing national coverage.

Two Relays Per Week

This cellular system, operating at 400 MHz, will be supported by a multirelay infrastructure covering the country. Each mobile unit will be able to make and receive calls from any point in the country, since the system, thanks to its many relays, will automatically take care of following the mobile units.

Radiocom 2000 operates on the principle of dynamic frequency allocation (the frequency used is assigned to the mobile unit only for the duration of the conversation). Moreover, it reuses the same frequencies (in different zones), which allows for the optimum management of frequencies. Another advantage of this cellular system is its decentralized structure: the relays are installed progressively, according to the needs of communication and coverage, hence the investment is in proportion to the demand.

In addition, Radiocom 2000 is original in that it presents a joint public and business network service. As a public network, the system offers all the functionality of a car telephone. As a business network, it ensures permanent contact with vehicles, individual or fleet calls, the recording of calls in one's absence, the localization of the cell where the vehicle is located, access to the public network for some vehicles, and personalized geographic subscriptions. The PTT were the first to decide to install a joint radiotelephone service. Other services are following the same approach.

NATRA has received a Fr 200 million order to supply the first 150 relays to be installed by the first quarter of 1986. A new batch of about 60 relays are in the process of being ordered. The delivery of the first equipment will take place in February and March, and the validation of the system is planned for June-July.

Following the administration's estimate of the need, NATRA is gearing up to produce two relays per week, to a total of 500 or 600, which would make it possible to cover 85 percent of the country. As an example, television, which operates on the same frequency band, needs 2,000 broadcasting points to cover almost the entire country. That level will certainly not be reached but, beyond the first 500 relays, it is the success of the service that will decide the extension of the infrastructure.

A Fr 5 Billion Market

While seeing to the delivery of the relays, NATRA is preparing to market the mobile units. The latter will be sold on the free market--which does not mean that EGT [expansion unknown] will take no part in the distribution. In conformity with the administration's stipulations, NATRA has made public the

specifications (provisional until final approval of the software) of the Radiocom 2000 mobile units.

All manufacturers are interested in it because the market is a very attractive one: if French needs between now and 1990 are estimated at 250,000 mobile units, the corresponding market would be around Fr 5 billion (the average price of a basic model will be around Fr 20,000). However, taking into account the complexity of the system and the high development cost, some will hesitate to get into the competition immediately. Hence MATRA's proposal "which has no monopolistic intentions," to sell to different manufacturers subsets or sets which would then be "personalized." It would provide an economical way to get into the market very quickly.

For its part, MATRA has a direct sales force in the Paris area and the group's private installers, and is setting up a network of approved distributors.

Deeply committed to the radiotelephone business--it has hired 130 people for the program and has taken on half the total development cost of the Radiocom 2000 estimated at FR 240 million, the rest constituting the subject of a PTT market study--MATRA means to occupy a prime niche in the market. That is why the firm is applying itself to developing a complete range of mobile units (from the basic model to the portable with various other models in between for business networks), and is interested in new services (linking the mobile unit with the memory card of rental cars, the DGT/SNCF [General Directorate of Telecommunications/French National Railroad Company] project to install public telephones on trains), as well as exports.

On this point, MATRA has decided to "go all out" as soon as Radiocom 2000 is operational, even though it is aware that it will have to modify its system. It also has declared its intention to develop a 900 MHz version "to be able to take part in international contracts which require this frequency band." It believes that Radiocom 2000 has two important assets: joint service, and a 12.5 kHz spacing between channels, which makes it possible to offer more frequencies than the Scandinavian (NMT) and German (Siemens) systems, limited by a 25 kHz spacing, and a fortiori the American and English systems (30 kHz). This technical advantage is based on MATRA's perfecting a signalling/supervisory system situated on the lower bands (around 30 Hz) rather than on the upper bands (towards 3 kHz) as is the case with the competitors. "MATRA has gone into the radio-telephone field not to 'make a splash' but to occupy a significant place on the world market," Remy, manager of the group's telecommunications branch confided to us. It is up to the firm to prove it.

9824
CS01 5500/2623

FRANCE

PTT BUDGET DEVOTED MAINLY TO ELECTRONICS, SPACE

Paris INTER ELECTRONIQUE in French 10 Dec 84 p 13

[Article: "PTT Budget: Funds for Technology"]

[Text] Whether it is for the postal services or telecommunications, the investment funds of the PTT [Postal and Communications Service] 1985 budget indicate a financial effort which aims at developing technology. Earmarked for the traditional activities of the Ministry (equipment), these funds will also finance the electronic and space sector.

With a total package of nearly Fr 42 billion, the investment funds of the 1985 PTT budget show an increase of 16.3 percent. However, nearly Fr 7.5 billion will be devoted to the electronic sector and space. As a matter of fact, out of a total of Fr 30.4 billion assigned to the telecommunications investment budget, some Fr 4 billion will go to finance the electronic sector. This allocation involves the development of this sector on the one hand and on the other constitutes a contribution by the state of its own funds to the assets of the sector's nationalized enterprises. The funds for the development of the electronic sector--totaling Fr 2.37 billion--are divided into Fr 2.03 billion for computerization, Fr 233 million allocated to ADI [Data Processing Agency], Fr 90 million to INRIA [National Institute of Data Processing and Automation Research], and Fr 14 million to CESIA [expansion unknown]. These three organizations would also be an operating subsidy for a total of Fr 184 million. With regard to the state's contribution of its own funds to the assets of the enterprises in the electronic sector (Bull, Thomson Telecoms, CGCT [General Telephone Construction Company]), the Telecommunications Department will pay Fr 1.7 billion.

For the first time, DGT [General Directorate of Telecommunications] will also contribute to the programs (civil research budget), and to the CNES [National Center for Space Studies] programs a total of Fr 3.42 billion.

Moreover, the Fr 28.2 billion in program authorization funds earmarked for the DGT represent an increase of only 4.8 percent

by comparison with last year (a decline taking inflation into account). The main objectives are to reach 23.1 million main lines by the end of 1985 (22 million in 1984) and 35.6 million telephone stations. The development of the Videotex broadcasting program, for its part, will bring about an increase in the Minitel terminal pool which will number a total of 1.6 million by the end of next year. Moreover, with a Fr 1 billion package, the wide band videocommunication networks should get under way both in coaxial and fiber optics technology. DGT activities will have an impact on the local networks, program assistance, operating projects (promotion of videocommunications, business networks etc.) and interurban links. In this last area, the DGT will increase its activities. Beginning in 1985, some 20,000 km of optical fibers will be ordered (for a total of Fr 200 to 250 million), which will complete the 40,000 km ordered during the last 3 years (Fr 450 million). One of the largest projects will be the installation of an "optical bypass" around Paris at the end of 1985/beginning of 1986. Using multicode 1.3 um and a 140Mbits/s output, this link will permit the transmission (for professional use) of voice, television data and images at 34 Mbits/s (connections are planned with network heads).

As far as research and development are concerned, nearly Fr 2.9 billion will be allocated to multiservice networks, the unit automatic exchanges of the next generation (multiservice and wide band), submarine optic cables, the development of the land network linked with Telecom 1, and the study of new satellite telecommunications equipment.

The Postal Services investment program totals Fr 2.85 billion (+16 percent) earmarked for computerization and automation. In addition to the acquisition of automatic sorting equipment, this program plans for the development of postal office automation with the installation of franking counters (GAPA), administrative microcomputers, free services and various automatic machines. Finally, the extension of the Cleops network (financial terminals) will be pursued with the acquisition of 1848 terminals and 35 minicomputers.

9824

CSO: 5500/2623

LUXEMBOURG

NEW MEDIA SATELLITE CORPORATION FOUNDED

Zuerich NEUE ZUERCHER ZEITUNG in German 14 Mar 85 p 4

[Text] With the foundation in early March of the European Satellite Company (SES), Luxembourg will achieve a "solid and lasting presence in the European audio-visual area of tomorrow," according to Prime Minister Santer. SES's task is to operate a television and radio satellite with an expected 16 channels that are to be made available to privately owned stations in Europe. The artificial earth satellite is to be put into orbit in early 1986. SES's own capital resources currently are 300 million Luxembourg francs (about 12 million Swiss francs). It was underwritten by 11 investors, including the Luxembourg branch of the Dresdner Bank and the Deutsche Bank. Luxembourg investors are the Nationale Sparkasse [National Savings Bank], the Nationale Kredit- und Investitionsgesellschaft [National Credit and Investment Corporation] and a private holding company. They like to stress in the Grand Duchy that SES is an exclusively European company.

Anger with Paris

The government describes the foundation of SES as a logical continuation of the Grand Duchy's 50-year tradition of private radio and television. However, the larger involvement did not go quite as smoothly as this statement suggests. First, there is the question of whether it is necessary to set up a new company at all, since with the Compagnie Luxembourgeoise de Telediffusion (CLT) [Luxembourg Broadcasting Corporation], the parent company of Radio-Tele-Luxembourg (RTL), the Grand Duchy is anything but underrepresented in the media sector. One does not have to look far to find the reason for the establishment of a second pillar. The CLT is largely controlled by Belgian and French companies; the long arm of the French Government had frequently been felt in the past, especially when Luxembourg sought to encourage CLT to participate in the risky, although promising satellite undertaking. Attempts to launch a "Luxsat" of their own were unsuccessful and the blame for it was put on French noise interference.

Coca-Cola Image

Former Prime Minister Werner finally lost his cool. Early last year, without paying any more attention to the concerns of CLT and the anger in Paris, he energetically pushed for the establishment of Coronet, a corporation of Clay

Whitehead, an American, which was to examine the technical possibilities for a Luxembourg satellite and to put together a group of financially strong investors. Paris considered this an act of open provocation since the government was negotiating with CLT about the use of two channels of a French television satellite. The Coronet project was considered competition. Under pressure from the French Government, CLT went so far as to threaten to pull a large part of its facilities out of Luxembourg.

The formation of a Christian-Democrat and Socialist coalition in Luxembourg following the June 1984 elections led the government to downplay its relations with Whitehead. It recognized the danger of becoming notorious in all of Europe as the U.S. media corporations' Trojan horse. First, pressure was put on Whitehead to reduce his participation in Coronet; when the American took more and more time to organize a viable financing scheme and the necessary investors, the break was complete and the focus shifted to the formation of SES. The names of the partners they were able to enlist suggest that this is a serious project. The capital stock will be increased within six months at the latest. About one-quarter of all expenditures for the satellite and ground stations will be raised in the operative phase from its own funds, the remainder through credits and leasing.

Alternative for RTL?

SES itself will not finance any programs but is merely going to provide the hardware. Luxembourg remains silent about who the potential users are to whom they are already talking. Only one name is being mentioned, namely CLT. In light of the former strains and reservations concerning an independent Luxembourg satellite, this rapprochement must come as a surprise. In addition, an agreement between the Luxembourg and French governments provides for CLT/RTL to start transmitting in mid-1986 a francophone and a German-language program via the French satellite. However, no agreement has yet been reached about the rental fees.

Beyond that, there is growing concern in CLT about the difficulties that are emerging in the French media landscape. In mid-April at the earliest, when the Fabius government has accepted the commissioned report on the structure of regional and private television, more definitive data are expected to analyze the cost-effectiveness of the undertaking. The privileged position RTL used to enjoy in France is in danger of being eroded. That is why at least the Belgian stockholders of CLT do not mind the company becoming more independent from France and SES providing an alternative to the French satellite which may also be less expensive. Thus, Societe generale de Belgique and the financial strategist Albert Frere's Groupe Bruxelles Lambert, two of the most important stockholders of CLT, are participating directly or indirectly in SES. Nevertheless, this step should not be over-interpreted-- it is one of the many provisional decisions in the struggle for Europe's media market which is steadily growing in intensity.

NETHERLANDS

REGULATIONS, FUTURE OF TELEVISION SATELLITES

Rotterdam NRC HANDELSBLAD in Dutch 6,7,8 Mar 85

[Article by Markus Meulmeester]

[6 Mar 85 p 2]

[Text] Rotterdam, 6 March — Generally speaking, the coming of dozens of broadcasting satellites evokes the most fantastic ideas and expectations. Therefore, first an optimistic and then a pessimistic view of the future relative to the opportunities presented by the broadcasting satellites.

Many people believe that about 10 years from now Europe will find itself under a barrage of all kinds of national and international satellite programs. As a result, the Dutch broadcasting system as a whole will shake on its foundations. The volume of advertising via satellite television will increase drastically and the commercial enterprises which produce the television programs will profit greatly by it. The operators of cable networks are trembling because many people will give up their subscriptions to the cable network and purchase a parabolic antenna to receive satellite signals.

A more pessimistic view of the advent of broadcasting satellites shows problems with the financing of the launchings, constitutional and legal restrictions, a lack of interest on the part of the consumer and hesitation on the part of advertisers.

An answer to the question of whether the optimistic or the pessimistic view of the future will become reality, seems hard to give at this time. However, experts believe that within the next 10 years or so a substantial if not overwhelming network of broadcasting satellites will be hanging around the earth.

Transmissions

In 1977, a world conference took place during which the countries agreed with one another that any country would be able to have a maximum of five satellite channels at its disposal. At this conference the various satellite positions for Europe were also determined and it was stipulated that the transmissions from the satellite could not go beyond the territorial borders. However, it will never be technically possible to stop the transmissions at the territorial borders. Thus a number of countries will also be able to receive the

programs from surrounding countries. For the Netherlands, with 8 broadcasting satellites in the same position this means a choice of 40 channels. But we are far from having reached that point yet.

One certainty is that within the next 5 years, at least six satellites will be located in a geostationary orbit (35,786 kilometers high) above the equator and will be beaming television programs to several countries in Europe. A little more than half a year from now, Eutelsat, the European cooperation among national PTT [Posts, Telegraph and Telephone Agency] bodies, will launch the European communication satellite ECS-3. Earlier already, in 1983 the ECS-1 was launched, and last year the ECS-2, for telephone, telex and data traffic. The ECS-3 will also be suitable for videoconferences and for the exchange of information between computers far removed from one another. These communication satellites are also capable of broadcasting television programs.

In the Netherlands all programs of the English speaking Sky Channel and music Box, and French Television Channel 5 can be seen via ECS-1. Channels for the FRG, the Scandinavian countries, Italy, the Netherlands and Switzerland are also available. On board the ECS-2, two television channels have been reserved for program exchanges within Europe (Eurovision).

The head of the Central Division International Telecommunications at PTT, B. Vree, said that the ECS-1 acts as a back-up for the other satellite so that if one of them fails, the other can take over the telecommunications. According to Vree, Eutelsat has said: "That thing is hanging there only as a back-up anyhow. Let us see if we can use those satellites to transmit television signals to the reception antennas of the cable networks."

However, the programs which are broadcast via the satellite cannot be received with small dish antennas. Vree noted: "The power of a communication satellite is smaller so that you need antennas a little less than 5 meters in diameter to receive those signals. A broadcasting satellite must have much greater power because it must be possible for those signals to be received by small dishes of about 1 meter."

This capacity will come next year when the FRG and France will launch the first real broadcasting satellites. If all goes according to plan, Germany will be a few months ahead in sending a television satellite with three channels up to the satellite position above the equator. As a result, the FRG will get two new programs while the third channel will be used to receive stereo-radio broadcasts. Following this launching, the French satellite TDF-1 with four channels will go up. The intention is for two of those channels to be made available to the commercial broadcasting system RTL [Luxemburg Radio Broadcasting and Television System].

By early 1987, Tele-X (the X stands for experimental) for the Scandinavian countries Sweden, Norway and Finland, with three channels for television and commercial channels, will probably expand the number of European broadcasting satellites. In mid-1987 the experimental broadcasting satellite Olympus from the European Space Agency [ESA], with two television channels, will be launched. This satellite, which will also be used for scientific research,

will have a television channel for Italy and a channel with a range for all of Europe on board. (As an exception, this satellite will be allowed to go beyond the territorial borders.) The NOS [Netherlands Broadcasting Foundation], together with a number of other foreign broadcasting services, will provide programming via this channel under the name Olympus. The likelihood of Olympus going up this year yet is great because the contract of Euro-television (a Dutch company for subscription television) with ECS-1 will be dissolved. The NOS has now taken over the contract.

After the launching of Olympus, Italy will follow in 1988 with Italsat, and a back-up satellite will also be stationed in space. Even though England is participating to a large extent in the Olympus project (one-third), the country wants to put Unisat with four channels in the air in any case. Two channels would then be designated for the BBC [British Broadcasting Company] and two channels for the "independent broadcasters." According to an expert, one of the problems related to making this project a reality is the fact that financing for the construction and launching of the satellite is not completed yet. "The construction of a satellite costs a pretty penny."

Life Expectancy

The launching of an Ariane missile costs a total of \$25 million whereas the satellite, depending on its size and development costs, will cost between \$50 and \$100 million. As for the life expectancy of the satellites, PTT official Vree said: "At the present time, the majority of them last about 7 years. But they are heading for 10 years. The limited lifespan of the satellites is due, on the one hand, to the batteries running down and, on the other hand, to the fuel for the steering jets running out. As a matter of fact, those satellites do not stand completely still and those jet engines make sure that the antennas are directed accurately to within a tenth of a degree toward the earth. Hence, when the energy supply fails, it means the end of the satellite."

Whether in the coming years satellite television will become an actual part of the total program package cannot yet be predicted at the moment. Researchers, however, do agree that satellite television will have an impact in Europe only if the viewers can be persuaded to buy dish antennas and to rent electronic equipment to decode the signals sent out.

[7 Mar 85 p 2]

[Text] Hilversum, 7 March -- Experts estimate that broadcasting satellites will hardly affect the Dutch broadcasting system. It is true, however, that in Hilversum the development and advent of satellite television is being followed closely, although not feared. This is also what the acting general secretary of NOS, P.M. Hendriksen, thinks. He has recently been working on NOS's participation in the so-called Olympus project.

Little Bush

The broadcasting satellite Olympus will be launched in 1987 and will broadcast programs ranging all over Europe. Hendriksen: "I think that things will turn out better than expected for the broadcasting organizations in terms of competition. In all countries it is a fact that nearly three-quarters of the audience goes to two broadcasters. The remaining 25 percent is divided among the theoretically let us say 30 possible channels. Hence it will be extremely difficult, even for Olympus with Dutch subtitles, to compete against national programs in the Netherlands or in other European countries."

It is a fact, according to Hendriksen, that the German television programs which can be received on most of the 1,300 Dutch cable networks, have a terribly small audience. "Experience shows that for years now those German programs have attracted approximately 5 to 10 percent of the total viewing audience. The secretary of NOS does not expect satellite television to pull millions of viewers away from the Dutch programs. "Of course, it will cost us a few viewers but the viewing public is so large that it doesn't matter terribly much. When you are in the woods you don't care about a little bush."

Hendriksen is not afraid of the coming of more programs either, such as Sky Channel, the music programs from Music Box, and the French language TV-5. "I think that those broadcasters will steal viewers away from one another."

The head of the Radio, Television and Press Division at the Ministry for Welfare, Health and Culture [WVC], J.W. Reinold, does not believe that the broadcasting satellites will turn the Dutch broadcasting system upside down either. He estimates that the likelihood of a larger supply of programs than is already available, is small. "There is a painful lack of programs. It will be quite a trick for countries such as the FRG, France and England to come up with new programs. In my opinion, the supply of programs will include many reruns of series, summaries and compilations."

Potential

Reinold mentioned advertising, broadcast times (they say: "We will broadcast when the others have gone to bed") and the speed of news reporting as areas where satellite television could compete with the national television broadcasting companies. Reinold said: "Actually, we have hardly any idea about the viewer potential to be expected. The interest remains to be demonstrated. Furthermore, to the extent that the cable networks do not transmit the programs the viewers will have to purchase special equipment."

About the coming of the Olympus program -- a 3 year cooperative project among broadcasting corporations in the Netherlands (NOS), the FRG (ARD [Working Association of the Statutory Broadcasting Corporations of the FRG]), Italy (RAI [Italian Radio Broadcasting and Television Company]) and Ireland -- he said: "It will succeed only if the European broadcasting corporations are willing to develop a program jointly. If you manage to attract a small percentage of the potential viewing public with those programs, then you can say that you haven't done badly." According to Reinold, the European broadcasting satellite could

have a mission particularly in the cultural area. "If those broadcasts could provide the viewers in Western Europe with all kinds of factual information from Eastern Europe and the Balkan countries, this could mean an enrichment of the culture."

Market

According to NOS Secretary Hendriksen, financing of the satellite programs will have to come from the proceeds of advertising. What the Dutch broadcasting corporations are afraid of though is the roundabout introduction of a commercial third television network. Hendriksen said: "If there really were to be a kind of Sky Channel directed toward the Dutch public with Dutch subtitles, Dutch advertising and Dutch sports events, then the broadcasting corporations would become afraid. Then you would have introduced a commercial third network in a roundabout way. And we don't want that."

Hendriksen does not expect advertisers to run over to the broadcasting satellites. He said: "I do believe that most advertisers serve a national market. Hence my premise that one shouldn't be afraid, for example, that a European transmitter will adversely affect the national STER [Airways Advertising Foundation]. If Olympus provides a European program, then it can handle only advertising directed toward Europe and that involves quite different sums of money than those for advertising at the national level. In terms of advertising on a European broadcasting satellite, you have to think of the advertising of multinationals which one sees at airports."

WVC official Reinold expressed himself somewhat more cautiously about the advertising. "If we do not want to lose the national supply, then we will have to pay more attention to the wishes of the advertisers. In order to prevent the advertisers from fleeing abroad we will have to deliberate about the length of the advertising spots on television and take a more flexible approach."

Small Storm

Reinold does not believe that because of the coming of the satellites, people will cancel their subscriptions to the cable network en masse. "I think, for example, that it will be very difficult to stabilize those small dishes. At the time when there were still antennas on the roofs everywhere in the Netherlands, they were blown off as often as not whenever the smallest storm came up. With the coming of the cable networks the quality of reception of programs also improved. I expect that the cable networks will function even more than before as a general public service."

The problem which Hendriksen expects that the operators of cable networks will run into is that it will become increasingly more difficult to make a selection from the supply available in the air. "That is not yet all that hard now, but if more are added it will be hard for cable networks which are already full to make a choice between the BRT [Belgian Radio and Television - Dutch Service] and a broadcasting satellite, unless they decide to expand the cable network." However, according to him the operators of cable networks will make

every effort to put the signals which people with their own small dish want on the cable network.

[5 Mar 85 p 2]

[Text] Amsterdam, 8 March -- Dutch advertisers are looking forward with full confidence to the coming of the broadcasting satellites. "The monopoly of the STER will now in any case be broken," said Director M.A. Wille of the office of the Federation of Advertisers in Amsterdam. Wille feels that with the satellites it will be more possible than it has been so far to determine the reach of one's advertising. "The space for advertising will increase which will create better opportunities for planning. With the STER we are tied to fixed blocks. It is not to the advantage of advertisers to be compressed into blocks."

Because of the wider space for advertising there is a possibility, according to Wille, that the pressure on advertising rates will increase, as a result of which prices could go down. The director of the office of the Federation of Advertisers does see a disadvantage in the splitting up of advertising over the various broadcasting organizations. "That will always end up being more expensive, but for now we do see advantages in the upcoming differentiation."

STER

C.J. Smeekes, director of the Airways Advertising Foundation, believes that the coming of the broadcasting satellites will not cause advertisers to leave the STER in large numbers. "I am not afraid of the broadcasting satellites. It is excellent that there will be competition. But we must be able to wage that competitive struggle. We will have to be able to offer the advertisers floating blocks, commercials throughout the programs. If you look at Sky Channel, for example, there is already a question of inequality of rights. We are tied to the commercial spots around the news broadcasts whereas Sky Channel can send out the advertisement at any given time. A privilege which STER does not have. Otherwise I am not pleading for American circumstances where commercials are broadcast in the middle of a film for example."

Smeekes does not believe that the viewing public will no longer watch Netherlands 1 and 2. "In America you have a choice among 20 to 30 television channels. Research has demonstrated that 80 percent of the interest focuses on three channels. Furthermore, it is a fact that you can watch only one thing at a time."

The director of STER believes that there are enough opportunities in the Netherlands to withstand "the storm" which will break loose because of the broadcasting satellites. "After all, advertisers do look for the medium with highest access. They want to reach as many people as possible simultaneously. In addition, advertising via more broadcasting organizations will be much more expensive." The director of STER also expects that advertising via a number of broadcasting satellites will also mean a reduction of reach, which would be disadvantageous for the advertisers. However, the director of STER is not completely free of anxiety with regard to satellite transmitters because he

would find it annoying if the Luxemburg Radio Broadcasting and Television System were to start broadcasting commercials directed to the Netherlands.

Transmitters

At the present time, owners of dish antennas are able to receive more than 10 different satellite transmitters. They are, via the European communication satellite ECS, programs from the Italian group RAI, summaries and reruns from the German transmitter ZDF-2 [Second German Television] with coded sound channel, a Swiss film channel, Music Box, TV-5 and Sky Channel. At the same time, the World Channel daily broadcasts a 2 to 3 hour (even though with coded signal) evangelical program. In addition, via a communication satellite from Intelsat (an organization which, with a network of about 15 satellites, handles the intercontinental telephone and telex communications) the English film transmitters Premiere and Ten, the sports program Screensport and a channel for children can be picked up. The Russian programs of Horizon and Moscow-1 can also be picked up.

By August of this year it will be possible in Europe via the satellites of Intelsat to watch the 24 hour a day program of Ted Turner's cable news network from America. With a dish antenna of a little more than 1 meter the weather pictures from Meteosat, which provide an uninterrupted picture of the cloud formations over Europe, can also be picked up.

Antenna Manufacturers

The companies which manufacture dish antennas in the Netherlands have different expectations about the coming of broadcasting satellites. Director P. van der Werff of Globesat in Wolfheze (Guelderland) which produces antennas of a little less than 2 meters, does not think that private individuals will be purchasing the antennas on a large scale at the moment. "The costs are not such that you say: I'll quickly buy one. Only the very rich can afford them. It is true that I am working on developing as cheap a model as possible which will cost between 7,000 and 8,000 guilders. Right now, it is primarily small cable networks, hotels and discotheques which buy such an antenna."

The ASE [expansion unknown] satellite television company in Hoogeveen has been manufacturing parabolic antennas since 1980, primarily of 1.2 meters, 2 meters and 3 meters diameter. Director J.W. Jonker expects a great deal from the advent of the broadcasting satellites. "I think that many people prefer free reception from satellites over reception via cable. We have a prototype of a 75 centimeter antenna with which we can hit the market as soon as those satellites arrive." Prices quoted by Jonker for the antennas lie between 5,000 and 10,000 guilders. "I expect that when the supply of programs increases, prices will go down."

Satellite Position

According to the director of Globesat one problem remains in that, to receive programs transmitted via the Intelsat satellite, one has to direct the antenna toward a different satellite. A rather precise and time consuming task, because the angle of inclination of the dish antenna must also be changed, said Van der Werff.

Van der Werff is planning to hit the market a little less than 1 year from now with a 1.2 meter diameter dish antenna costing approximately 5,000 guilders. He does not believe, however, that pay television via the satellites will become popular in the Netherlands. "It is far too expensive. In my opinion it will be a fiasco. In America you see companies which deal in pay television disappear one after another because nobody makes any profit."

Costly

In a number of weeks, the municipalities of The Hague and Rotterdam are going to put programs from the pay television enterprise Filmnet-ATN [expansion unknown] on the cable network. Subscribers will have to pay about 35 guilders per month for that, plus 130 guilders in installation costs for the decoder.

The media expert for the municipality of Rotterdam, K. Weeda, thinks that about 15 percent (approximately 36,000 residences) of the people connected with the cable network will subscribe. Weeda does not expect that the coming of broadcasting satellites will cause many people to purchase a special antenna. "It is a rather costly affair."

According to Weeda, organizations which are currently broadcasting their programs via a communication satellite will not be quick to shift to broadcasting satellites either. "The programs now come in via terminal stations from the cable networks. A signal via a broadcasting satellite can be picked up by everyone with an antenna. There will be a great deal of theft of coded signals which can be decoded with a little technology. With cable networks control of who receives the programs is much greater of course."

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NETHERLANDS

SWEDEN'S ERICSSON PARTICIPATING IN PHONE NET MODERNIZATION

Stockholm SVENSKA DAGBLADET in Swedish 16 Mar 85 p 33

[Article by Lars-Georg Bergkvist: "Ericsson Gets Billion-Kronor Order"]

[Text] It will be Sweden's Ericsson and the Dutch-U.S. cooperating partners Phillips-AT&T which will jointly supply the equipment needed to modernize the Dutch telephone network over the next 3 years. IT&T, the other principal competitor, will not have a chance until 1989.

The Netherlands is a big market for the world's telecommunications industries. Some 6 billion gulden--15 billion kronor--will be invested in the Dutch telephone network over the next 20 years.

And Ericsson will be one of two suppliers for the period 1986, 1987 and 1988. It is not yet known what the Swedish company's share of the contract will be; this will be determined later by Dutch Televerket.

30 Percent of the Market

The Netherlands is one of Ericsson's oldest markets; the company made its first delivery there in 1923. Today, the Netherlands has more than 50 AXE stations. Some 300,000 telephone lines have been installed and another 100,000 are on order.

AXE stations are manufactured by the Ericsson factory in Rijen, which employs 800.

Today, Ericsson has 30 percent of the market; the rest belongs to Phillips. U.S. IT&T will not enter the Dutch market until 1989.

At that time, the overall need for telephone equipment is expected to grow. A release issued by Dutch telecommunications authorities clearly states that IT&T's entry into the market will not be at the expense of Ericsson and Phillips/AT&T.

8952
CSO: 5500/2619

NORWAY

COUNTRY'S LARGEST TELECOMMUNICATIONS FIRM PLANS EXPORT DRIVE

Oslo AFTENPOSTEN in Norwegian 28 Mar 85 p 31

[Article by Ulf Peter Hellström]

[Text] Risor, March--Norwegian telephones will become a growing export item for the EB group. This is the goal of the 320 employees at this country's only telephone factory in Risor. New touch-tone phones and special equipment are now being introduced on the foreign market. Prototype production of the cordless telephone has begun at the plant. An alarm telephone will soon be produced that will cost less than 2,500 kroner in Norway. It is important for the EB plant in Risor to keep up with competitors abroad, since this fall parliament is expected to support full competition in the sale of telephones.

The electronics giants are waiting in line to enter the Norwegian telephone market when it opens up. The EB plant in Risor will probably be affected by the new competition more than most other telecommunications firms in Norway.

"We have been working on our internationalization program for 1.5 years. Our goal is to become competitive on international markets. This will also help us in the upcoming competition here at home. This is an obvious prerequisite for our survival over the next 4 or 5 years," marketing chief Tom Nysted of EB Teleterminaler said. This is the new name of the EB group's operation in Risor, which is currently operating at a profit. It is a separate area of operation within the enormous EB group, which grosses in the billions.

The employees at the Risor plant are involved in a far-reaching conversion process. Since it was founded in 1977, the telephone manufacturer has had the Telecommunications Service as its predominant customer on the Norwegian market. During the past 1.5 years, however, the company has sought new markets abroad. Investments of about 20 million kroner in advanced equipment have increased productivity, thereby making the company capable of competing with firms in the Far East, including Japan, according to production chief Lars Tveitnes. One example is that nine simple robots now assemble the magnetic parts of the speakers used in touch-tone phones. Previously, four workers were needed for this task. "Our velocity of circulation of capital has reached 20 on an annual basis," Tveitnes said.

Sheltered

Like large sectors of Norway's telecommunications industry, the Risør factory has led a somewhat sheltered existence because of the monopoly of the Telecommunications Service. Now it is opening up to competition on new markets. The Risør factory is one of the cornerstones of the Norwegian industry that may be vulnerable when the Japanese, American, and European telecommunications giants begin to sell their inexpensive telephones in Norwegian shops. A process of rethinking may be detected among plant managers. Previously, technology and specifications from the Telecommunications Service were at the center of attention. Now such terms as market research, marketing, and marketing strategies are used again and again by EB management.

"The lifetime of the telephone is becoming shorter and shorter. At the same time, market research abroad indicates that consumers are price-conscious. Most consumers are primarily interested in a telephone that will do its job as a telecommunications tool. We are less knowledgeable of the telephone market than we previously assumed. And it is men, not women, who buy phones," said marketing chief Nysted. He added that the increasing demand for high performance at a low price led to continuing product development. More technology is packed into the new generations of telephones. It is the combination of technology, quality, price, and workmanship that is EB's formula for success in the struggle for a larger share of the market.

By the year 2000 the company hopes to develop a cordless phone that will replace both the ordinary telephone of today and the mobile telephone in the NMT system. This combination device will be available only sometime in the future, however. Developments in the near future will include new analog touch-tone phones, cordless and totally digital telephones, and equipment designed for special services. EB has special telephones on the drawing board that will be able to provide remotely controlled heating at a vacation cottage.

As early as this fall, the Norwegian company will market an alarm telephone that, according to plans, will cost under 2,500 kroner. The telephone will automatically sound an alarm if there is a break-in or a fire. The alarm will go to the proper authorities over the public telephone network. Initially, the market for this telephone will be limited to institutions in the health-care and social services sectors.

New Touch-Tone Phones

A trimmed-down version of the Norwegian touch-tone phone will also be ready for foreign markets in the near future. It probably will cost under 400 kroner. The EB company in Risør hopes to enter markets in Great Britain and in the ASEAN countries in the Far East. The company is also awaiting political decisions concerning the telecommunications systems in countries such as Denmark and Sweden.

"This year the capacity in Risør is planned to be 350,000 telephones. The main product is the touch-tone phone, but the new compact version is also

being produced in large numbers. This capacity can be increased to 800,000 telephones by increasing the 1600 to 2115 shift," Tveitnes said.

Microprocessor technology has become a necessity at telephone-producing plants. The compact electronics provide not only room for improvements at a lower price, but also advanced, specialized equipment for the consumer with special communications needs. Another technical innovation that probably will be available in the latter half of 1986 is an electronic receiver hook that will replace the manual version.

Like Terms

"We will be happy to compete, but this is assuming that the competition will be on like terms. If Norway becomes an open market for telephones, then we must be allowed in other countries, as well," Nysted said.

Why are Norwegian telephones more expensive than phones produced abroad, which often are smuggled into Norway?

"Because some of these telephones do not meet the strict technical standards we are required to fulfil in Norway. The copper cables in the Norwegian telephone network are thinner than those in many other countries. The Telecommunications Service has compensated for this by placing strict requirements on telephones. This, in turn, results in more expensive products in Norway than in other countries," Tveitnes said.

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SWEDEN

PAPER ATTACKS AGENCY'S POWER TO DECIDE MONOPOLY ROLE

Stockholm SVENSKA DAGBLADET in Swedish 3 Mar 85 p 2

[Editorial: "All Televerket's Wires"]

[Text] In one respect, Televerket differs from all other companies and authorities: Televerket never makes a mistake, has never made a mistake and will never make a mistake for the simple reason that Televerket cannot make a mistake.

And if, in spite of everything, something should go wrong with all of Televerket's wires, lines or debit accounts, it could not possibly be Televerket's fault; it would be someone else's, whomever it feels should take the blame.

Such a company, faultless almost to the point of being superhuman, should be valued far in excess of its profits. The fact that this is not the case is obviously not Televerket's fault--but that of someone else outside Televerket.

Human and technical mistakes are being made from time to time in other telecommunications firms. This is unfortunate, but in most instances it is possible to arrive at an understanding of the mistake and to settle the matter amicably.

Of course, the explanation for the fact that Televerket does not engage in such settlements is that no technical mistakes are ever made within Televerket. Thus, the attitude of Televerket's management toward its customers is principally well founded.

And because of its present structure, being an authority as well as a business, private and competing companies remain hopelessly inferior to Televerket as a business since it can always lean on its function as an authority.

What is most absurd is that Televerket, by means of its authority, can decide the degree to which competitors' telephone equipment should be allowed. It cannot be contested that Televerket has abused its power of authority in this respect in the last few years when technical developments have been rapid.

In general, Televerket is functioning very well, of course. Sweden's telecommunications network is working well technically. But during the last few

decades--and especially during the very last few years--telecommunications technology has advanced very rapidly, and practically all the facets of what once was a natural monopoly for Televerket are now subject to competition.

It is time to split Televerket into two principal parts, one of which, Televerket, would continue to operate the central telecommunications network, be responsible for telephone service quality and data transmissions as well as cooperative international telecommunications, while the other principal part, including everything else, i.e. practically everything subject to competition, would be open to any firm wishing to market its products.

There have been parliamentary proposals to this effect on behalf of the Moderate Coalition Party, the Center Party and the Liberal Party.

It would be interesting to learn the Social Democratic Labor Party and the Communist Left Party's reasons for maintaining the present company structure. And who knows, during the election campaign the Social Democratic Labor Party may come up with the slogan: "Keep Televerket's Monopoly?"

Indeed, it is important to consolidate all the wires within the so-called public sector.

8952

CSO: 3500/2619

SWEDEN

GOVERNMENT PROPOSES TO LIMIT AGENCY'S MONOPOLY

Stockholm DAGENS NYHETER in Swedish 19 Mar 85 p 8

[Article by Willy Silberstein: "Open Market for Tele..."]

[Text] Televerket will retain a certain monopoly on the installation of telephones for new subscribers but, otherwise, the market will be open to competitors. Televerket's manufacturing division, Teli, will become a separate company, but later than was earlier predicted.

According to what SVENSKA DAGBLADET has learned, these are a couple of the new items in Minister of Communications Curt Bostrom's government proposal, which will be submitted to Parliament toward the end of the month.

On the other hand, Televerket will retain its monopoly on subscriber exchanges and high speed modals.

Preferably, Televerket's monopoly on telephone exchanges should have been eliminated altogether, but the government does not go this far in its proposal. Televerket's monopoly remains in that a new subscriber automatically gets an exchange made by Televerket, if nothing else is agreed upon.

This means that Televerket is also responsible for future cost-free upkeep of "the initial exchange."

But if a new subscriber should state that he or she does not want an exchange from Televerket, it would be possible to purchase an exchange from another manufacturer.

Technical Requirements

In order to sell exchanges that will be hooked up to the network, certain technical requirements must be met. These requirements will be established by Televerket.

Suppliers must have their own equipment tested, either by an independent testing laboratory in Sweden, abroad or by Televerket.

Televerket also has the right to remove telephone exchanges and test them.

Controversial

The controversial issue in the government's proposal is Teli's future. Teli is the company's industrial division, which manufactures telephones and telephone exchanges, among other things. Teli factories are located in Nynashamn, Vanersborg and Sundsvall.

The decision to make Teli an independent company was made during the non-socialist government period. The Social Democrats voted against it. It was also severely criticized by the various union organizations involved.

This is still a very sensitive issue. When Prime Minister Olof Palme came to Sundsvall on an election campaign tour recently, he was met by a crowd of demonstrators who demanded that Teli not be made an independent company.

According to the decision made by the nonsocialist government, which is still valid, Teli shall become an independent company 1 July this year.

Minister of Communications Curt Bostrom is now considering a postponement, but he denies that this is due to the fact that the next budget proposal, which will be submitted to Parliament January 1986, will contain a new proposal to establish an independent Teli company. The reason is to allow more time for negotiations between Televerket management and the unions.

In his proposal, Bostrom also endorses the sale of Televerket's approximately 9 percent holdings in Ericsson Information System.

Further Study

Bostrom wants to study several issues further, including the issue of harmonizing Televerket's demand for telephones with existing demands abroad. Due to the developing shortage of radio broadcasting frequencies, more and more applicants are being turned down, whose appeals are often submitted to Televerket's managing director. This is another issue Bostrom wants to study further.

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SWEDEN

VOLVO-DATA REAPING SUCCESS FROM INTERNATIONAL ELECTRONIC MAIL NET

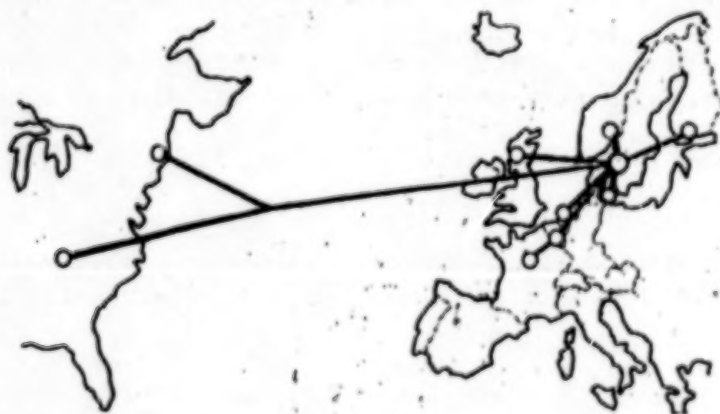
Stockholm DAGENS NYHETER in Swedish 2 Apr 85 p 12

[Article by Olof Bergman]

[Text] Volvo plays a role in the data world that is largely unknown to the general public. The company's special communications system, "Memo"--an electronic mailing system--has become a best-seller. Today around 70 companies around the world with roughly 120,000 users have bought this new system for sending mail via local and international data networks.

From the beginning Volvo-Data was the one developing the so-called software or program to handle mailing functions. Memo--Latin for "I remember"--is just one of the possibilities within the network structure that has been built up for the concern.

In an impressive control room with walls covered with viewing screens operators see to it that all programs function in the network. Two permanent connections go from here to the U.S. subsidiary and two to Belgium. All the concern's units in Sweden send out messages via permanent or dialed lines in the computers supervised from the control room--which is manned day and night every day in the year except for a couple of hours on Christmas Day.



This is a sketch of Volvo's data transmission network. There are connections from headquarters in Goteborg with Oslo, Copenhagen and Helsinki plus branches in Holland, Belgium, France, Scotland and the United States.

Around 13,000 Terminals

In all there are around 13,000 so-called SNA terminals in the Volvo concern. They are part of what is called the network architecture. This means that they can all "talk" to each other via the network and can also use a number of different programs in the administrative and technical areas. One can also both send and receive telex communications via these terminals. An indication of how well Memo is utilized is that when we visited there one Monday morning over 640 people were sending letters or communications.

A study made by a multinational company showed that Memo users increase their production capacity by 5 percent. This means, to put it another way, that people who use the communications system gain 25 extra minutes a day which can be spent on other tasks. Perhaps it should be added that Memo is sold through a separate subsidiary, Verimation, which is owned by Volvo and the Ericsson concern.

Provides Railroad Timetables

Volvo-Data has also developed "SESAM" and "DIAL-OUT." The first magical-sounding name stands for a superior system designed to help the users in various ways and to facilitate the dialogue between people and machines. SESAM makes it possible to gain access to all network services. It can also provide information about such things as train and airplane timetables to the most common travel destinations, hotel addresses, the possibility of reserving tickets and details about courses offered within the concern.

As the name suggests, DIAL-OUT is a special program for getting in contact with data bases around the world from the terminals. There are 20 different so-called data hosts for Volvo personnel today with several hundred data bases available in various areas. They represent a volume of 100 million documents in the most diverse areas.

Those who use DIAL-OUT never have to lift a telephone receiver. They simply select via the data terminal which data base they want to consult and a short time later receive a command to log in and give the "password" or command that tells the computer that they are legitimate users. Then it is a matter of asking the data base questions and requesting documents that can be read on the screen.

Proud

Within the division of advanced computer technology they are a little proud not just because of Memo but on account of the achievements in the data area generally.

"We are probably around 2 years ahead of other concerns with regard to development," said chief Gunnar Lindberg. Programs are being developed in all conceivable areas where computers can be used, whether this involves information systems or computer-based engineering technology, CAE for short.

For example strength calculations are one of the specialties.

At the moment they are trying new possibilities for transmitting information in the CAD-CAM area between the concern's various production units. In layman's terms this involves transmitting design blueprints in such a way that they cannot be distorted or misunderstood. Large amounts of information must be transferred between subsidiaries in different cities. For this reason high transmission speed is required.

Faster

Today they are working with 56 kilobits lines, which means that around 56,000 symbols per second pour through the telephone lines. Very soon they will try a speed of 2 megabits, which is the equivalent of 2 million symbols. At first this will be tested on a local connection in Goteborg.

The Telecommunications Agency estimates that it will eventually be possible to offer this transmission speed over the entire country on permanent lines for special purposes.

Footnote: Volvo-Data is an entirely self-financed unit within the Volvo concern and has 620 employees. Sales for 1985 are estimated at around 408 million kronor. The company is responsible for three-quarters of the concern's research and development projects in methods and technology.

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